

ATLAS OF THE FLORA OF NEW ENGLAND: POACEAE

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ABSTRACT. Dot maps are provided to depict the distribution at the county level of the Poaceae growing outside of cultivation in the six New England states of the northeastern United States. The 338 taxa (species, subspecies, varieties, and hybrids, but not forms) are mapped based on specimens in the major herbaria of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut, with primary emphasis on the holdings of the New England Botanical Club herbarium (NEBC). Brief synonymy to account for names used in recent manuals and floras for the area, habitat, chromosome information, and common names are also provided.

Key Words: flora, New England, atlas, distribution, Poaceae

This article is the second in a series that will present the distributions of the vascular flora of New England in the form of dot distribution maps at the county level. The atlas is being posted on the internet at <http://www.herbaria.harvard.edu/~rangelo/Neatlas0/WebIntro.html> where we will attempt to keep it updated.

This work encompasses all vascular plants (pteridophytes and spermatophytes) at the rank of species, subspecies, and variety growing outside of cultivation in the six New England states (Figure 1). Hybrids are also included, but forms and other ranks below the level of variety are not. The dots are based primarily on voucher specimens in the herbaria of New England representing reproducing populations, or plants persisting long after cultivation when it is uncertain that they are actually naturalized. This second installment comprises the Poaceae. The number of taxa treated is 341, of which 338 are mapped; 152, a remarkably high 45 percent, are not native to New England, and 6 are hybrids. Future accounts will treat the distribution of the rest of the angiosperms.

We intend to gather this series of articles, together with additional background material, into a separate volume upon completion of all the maps. It is our hope, in the meantime, that these

articles will stimulate additional field work to supplement the distributions portrayed in the maps. The New England Botanical Club herbarium, which has proven to be the most important resource for this project, is especially eager to receive specimens documenting range extensions. We also would like to be informed of such specimens in other herbaria. Similarly, because the atlas of the New England flora will be continuously updated as new information becomes available, we are eager to receive notification of published corrections of cytological information and new, documented chromosome counts for taxa in the New England flora.

MATERIALS AND METHODS

Materials and methods are as outlined in Angelo and Boufford (1996) and are not repeated here.

TAXONOMY AND FORMAT

The taxonomy and nomenclature adopted for this work essentially follow that of a revision of A. Hitchcock and A. Chase's *Manual of the Grasses of the United States* (Barkworth et al., editors), except that genera are arranged alphabetically, as are species within genera. Named and unnamed hybrid taxa are placed alphabetically at the end of the genus. Unnamed hybrids combine the names of the progenitors alphabetically by epithet. Taxa that are not native to New England are indicated by uppercase text. A number of pending name changes (primarily in *Panicum*) could not be implemented since they were still unpublished at the time this work was sent to press.

Cited chromosome numbers are taken from indices prepared by Cave (1958a, b, 1959a, b, 1960, 1961, 1962, 1963, 1964, 1965), Goldblatt (1981, 1984, 1985, 1988), Goldblatt and Johnson (1990, 1991, 1994, 1996), Löve and Löve (1975), Moore (1973, 1974, 1977), and Ornduff (1967, 1968, 1969). Very few of the counts are based on material from New England, but instead reflect counts made from throughout the range of the taxon.

Synonymy is provided primarily with respect to names used in standard manuals covering New England published from 1950 onward, including Fernald (1950), Gleason (1952), Gleason and Cronquist (1991), Seymour (1982), and Hitchcock (1951).

The following list will aid readers in finding familiar names that have been transferred to other genera:

Agropyron (in part) ⇒ *Elymus*, *Pascopyrum*

Andropogon (in part) ⇒ *Schizachyrium*

Agrostis (in part) ⇒ *Apera*

Avena (in part) ⇒ *Avenula*

Deschampsia (in part) ⇒ *Vahlodea*

Diplachne ⇒ *Leptochloa*

Elymus (in part) ⇒ *Leymus*, *Taeniatherum*

Elytrigia ⇒ *Elymus*, *Pascopyrum*

Festuca (in part) ⇒ *Lolium*, *Vulpia*

Glyceria (in part) ⇒ *Torreyochloa*

Heleochloa ⇒ *Crypsis*

Helictotrichon ⇒ *Avenula*

Leptoloma ⇒ *Digitaria*

Oryzopsis ⇒ *Piptatherum*

Panicum (in part) ⇒ *Urochloa*

Pseudosasa ⇒ *Arundinaria*

Puccinellia (in part) ⇒ *Torreyochloa*

Scleropoa ⇒ *Desmazeria*

Stipa ⇒ *Piptochaetium*

Triodia ⇒ *Tridens*

Trisetum (in part) ⇒ *Sphenopholis*

The following are taxa reported from our area in manuals, but no specimens seen:

Agrostis verticillata (*Agrostis viridis*, *Polypogon viridis*)

Ammophila arenaria

Apera interrupta

Aristida longespica (typical)

- Avena barbata*
Briza maxima
Bromus rubens
Calamagrostis perplexa
Danthonia sericea
Elymus hispidus subsp. *barbulatus* (*Agropyron trichophorum*)
Elymus trachycaulus subsp. *subsecundus* (*Agropyron trachycaulum* vars. *ciliatum* and *unilaterale*)
Eragrostis hirsuta
Hordeum brachyantherum
Hordeum gussoneanum (*Hordeum hystrix*)
Leptochloa uninervia
Muhlenbergia ramulosa (*Sporobolus ramulosus*)
Poa interior (*P. nemoralis* subsp. *interior*)
Poa secunda (*P. nevadensis* of Hitchcock 1951)

ANGIOSPERMAE (MAGNOLIOPSIDA)—
ANGIOSPERMS

MONOCOTYLEDONEAE (LILIIDAE)

POACEAE

Agropyron

AGROPYRON CRISTATUM (Linnaeus) Gaertner—Crested Wheatgrass (Figure 2). $2n = 14, 28, 42$. Waste places. From Eurasia.

AGROPYRON DESERTORUM (Fischer ex Link) Schultes—(Figure 2). $2n = 14, 28$. Waste places. From Eurasia.

Agrostis

AGROSTIS CANINA Linnaeus—Velvet Bent (Figure 2). $2n = 14, 16, 28, 35, 42, 56$. Fields, meadows, hillsides. From Europe.

AGROSTIS CAPILLARIS Linnaeus—Rhode Island Bent (Figure 2). $2n = 28-35$. Fields, pastures, roadsides, thickets, riverbanks. From Europe. [*A. TENUIS* Sibthorp; *A. TENUIS* var. *ARISTATA* (Parnell) Druce]

AGROSTIS ELLIOTTIANA Schultes—(Figure 3). $2n = 28$.
Fields, roadsides. From farther south.

AGROSTIS EXARATA Trinius—Spike Bent (Figure 3). $2n = 28$,
42, 56. Clearings in woods along dirt roads. From western
North America. [*A. EXARATA* var. *MONOLEPIS* (Torrey)
Hitchcock]

AGROSTIS GIGANTEA Roth—Redtop (Figure 3). $2n = 28$, 42.
Riverbanks, meadows, fields, shores, moist places. From Eu-
rope. [*A. ALBA*—misapplied; *A. STOLONIFERA* Linnaeus
var. *MAJOR* (Gaudin) Farwell]

Agrostis hyemalis (Walter) Britton, Sterns & Poggenburg—Tick-
legrass (Figure 3). $2n = 14$, 28, 42. Dry fields, open woods.

Agrostis mertensii Trinius—(Figure 4). $2n = 41$, 42, 49, 50, 55,
56. Mountain ledges. [*A. borealis* Hartman; *A. borealis* var.
americana (Scribner) Fernald]

Agrostis perennans (Walter) Tuckerman—Autumn Bent (Figure
4). $2n = 28$, 42. Open woods, thickets, dryish open soil. [*A.*
perennans var. *aestivalis* Vasey; *A. perennans* var. *elata*
(Pursh) Hitchcock; *A. altissima* (Walter) Tuckerman]

Agrostis scabra Willdenow—Fly-away Grass (Figure 4). $2n =$
28, ca. 35, 42. Roadsides, sterile, open soil (dry or wet). [*A.*
scabra var. *geminata* (Trinius) Swallen; *A. scabra* var. *sep-*
tentrionalis Fernald; *A. geminata* Trinius; *A. hyemalis* (Wal-
ter) Britton, Sterns & Poggenburg var. *scabra* (Willdenow)
H. L. Blomquist; *A. hyemalis* var. *tenuis* (Tuckerman) Glea-
son]

AGROSTIS STOLONIFERA Linnaeus—Creeping Bent (Figure
4). $2n = 24$, 28–46. Shores, marshes, shallow water. From
Europe. [*A. STOLONIFERA* var. *COMPACTA* Hartman; *A.*
STOLONIFERA var. *PALUSTRIS* (Hudson) Farwell; *A.*
ALBA Linnaeus var. *PALUSTRIS* (Hudson) Persoon; *A. PA-*
LUSTRIS Hudson]

Aira

AIRA CARYOPHYLLEA Linnaeus var. *CARYOPHYLLEA*—Silver Hairgrass (Figure 5). $2n = 14, 28$. Dry sand, waste places. From Europe.

AIRA PRAECOX Linnaeus—(Figure 5). $2n = 14$. Sandy fields. From Europe.

Alopecurus

Alopecurus aequalis Sobolewski—(Figure 5). $2n = 14, 28$. Shallow water, shores, meadows, ditches. [*A. aequalis* var. *natans* (Wahlenberg) Fernald]

ALOPECURUS CAROLINIANUS Walter—(Figure 5). $2n = 14, 28$. Cultivated land. From farther west and south.

ALOPECURUS GENICULATUS Linnaeus—Marsh Foxtail (Figure 6). $2n = 14, 28$. Wet roadsides, ditches, shallow water. From Eurasia.

ALOPECURUS MYOSUROIDES Hudson—Slender Foxtail (Figure 6). $2n = 14, 28$. Fields, waste places. From Europe.

ALOPECURUS PRATENSIS Linnaeus—Meadow Foxtail (Figure 6). $2n = 28, 42$. Fields, meadows, roadsides. From Eurasia.

Ammophila

Ammophila breviligulata Fernald—Beachgrass (Figure 6). $2n = 28$. Sand dunes.

Ammophila champlainensis Seymour—Champlain Beachgrass (Figure 7). Shores of freshwater lakes.

Amphicarpum

AMPHICARPUM PURSHII Kunth—(Figure 7). $2n = 18$. Roadsides. From farther south.

Andropogon

Andropogon gerardii Vitman—Big Bluestem (Figure 7). $2n = 20, 40, 60, 70, 80-86$. Dry, open ground. [*A. gerardii* var. *chrysocomus* (Nash) Fernald]

Andropogon glomeratus (Walter) Britton, Sterns & Poggenburg—Bushy Beardgrass (Figure 7). $2n = 20$. Boggy or other wet soils. [*A. virginicus* Linnaeus var. *abbreviatus* (Hackel) Fernald & Griscom]

Andropogon virginicus Linnaeus—Broom-sedge (Figure 8). $2n = 20$. Dry, open soil, thin woods, upper shores of ponds.

Anthoxanthum

ANTHOXANTHUM ARISTATUM Boissier—(Figure 8). $2n = 10, 20$. Waste places. From Europe. [*A. PUELII* Lecoq & Lamotte]

ANTHOXANTHUM ODORATUM Linnaeus—Sweet Vernal-grass (Figure 8). $2n = 10, 15, 20, 28$. Fields, roadsides, woods, waste places. From Europe.

Apera

APERASPICA-VENTI (Linnaeus) P. Beauvois—(Figure 8). $2n = 14$. Waste places. From Europe. [*AGROSTIS SPICA-VENTI* Linnaeus]

Aristida

Aristida basiramea Engelman ex Vasey—(Figure 9). Dry, sandy soil.

Aristida dichotoma Michaux—Poverty-grass (Figure 9). Dry, sterile soil. [*A. dichotoma* var. *curtissii* Gray ex S. Watson & Coulter; *A. basiramea* Engelman ex Vasey var. *curtissii* (A. Gray) Shinnars; *A. curtissii* (A. Gray) Nash]

Aristida longespica Poiret var. *geniculata* (Rafinesque) Fernald—(Figure 9). Sandy soil.

Aristida oligantha Michaux—Prairie Three-awn (Figure 9). $2n = 22$. Dry, open, sterile soil.

Aristida purpurascens Poiret—(Figure 10). Dry sandy or gravelly soil.

ARISTIDA PURPUREA Nuttall var. *NEALLEYI* (Vasey) Allred—(Figure 10). $2n = 22, 44$. Dry soil, roadsides. From farther west. [A. *GLAUCA* (Nees) Walpers]

Aristida tuberculosa Nuttall—Sea-beach Needlegrass (Figure 10). Dunes, dry sterile soil.

Arrhenatherum

ARRHENATHERUM ELATIUS (Linnaeus) P. Beauvois ex J. & C. Presl subsp. *ELATIUS*—Tall Oatgrass (Figure 10). $2n = 14, 28, 42, 56$. Fields, roadsides, waste ground. From Europe.

ARRHENATHERUM ELATIUS (Linnaeus) P. Beauvois ex J. & C. Presl subsp. *BULBOSUM* (Willdenow) Schübler & Martens—(Figure 11). $2n = 28$. Fields, roadsides, waste ground. From Europe. [A. *ELATIUS* var. *BULBOSUM* (Willdenow) Spenner]

Arthraxon

ARTHRAOXON HISPIDUS (Thunberg) Makino—(Figure 11). $2n = 10, 36$. Damp roadsides, ditches, shores. From eastern Asia. [A. *HISPIDUS* var. *CRYPTATHERUS* (Hackel) Honda]

Arundinaria

ARUNDINARIA JAPONICA Siebold & Zuccarini ex Steudel—Arrow Bamboo (Figure 11). $2n = 48$. Woods, stream banks. From eastern Asia. [*PSEUDOSASA JAPONICA* (Siebold & Zuccarini ex Steudel) Makino ex Nakai]

Avena

AVENA FATUA Linnaeus—Wild Oat (Figure 11). $2n = 42$. Waste places. From Europe.

AVENA SATIVA Linnaeus—Oat (Figure 12). $2n = 20, 42$. Waste places, roadsides. From Europe. [*A. SATIVA* var. *ORIENTALIS* (Schreber) Alefeld]

AVENA STRIGOSA Schreber—(Figure 12). $2n = 14, 28$. From Europe.

Avenula

AVENULA PUBESCENS (Hudson) Dumort—(Figure 12). $2n = 14, 28$. Fields, roadsides. From Europe. [*AVENULA PUBESCENS* Hudson; *HELICTOTRICHON PUBESCENS* (Hudson) Pilger]

Beckmannia

BECKMANNIA SYZIGACHNE (Steudel) Fernald—Slough-grass. A specimen of this Asian species collected from Cumberland County, Maine, was noted in the Ahles notebooks as being in the University of Massachusetts (Amherst) herbarium, but the voucher cannot be found there.

Bouteloua

Bouteloua curtipendula (Michaux) Torrey—Tall Grama-grass (Figure 12). $2n = 20-103$. Dry woods.

BOUTELOUA GRACILIS (Kunth) Lagasca ex Griffiths—Blue Grama-grass (Figure 13). $2n = 20-84$. Waste areas. From farther west.

BOUTELOUA HIRSUTA Lagasca—Hairy Grama-grass (Figure 13). $2n = 12-50$, ca. 60. Waste areas. From farther west.

BOUTELOUA REPENS (Kunth) Scribner & Merrill—Slender Grama-grass (Figure 13). $2n = 23, 40, 46, 60$. Waste areas. From farther west and south. [*B. FILIFORMIS* (Fournier) Griffiths]

BOUTELOUA RIGIDISETA (Steudel) Hitchcock—(Figure 13). $2n = 40$. Waste areas. From farther west and south.

BOUTELOUA SIMPLEX Lagasca—Mat Grama-grass (Figure 14). $2n = 20, 40$. Waste areas, wool waste. From farther west.

Brachyelytrum

Brachyelytrum erectum (Schreber ex Sprengel) P. Beauvois var. *erectum*—(Figure 14). $2n = 22$. Rich, moist woods and thickets.

Brachyelytrum erectum (Schreber ex Sprengel) P. Beauvois var. *glabratum* (Vasey ex Millspaugh) Koyama & Kawano—(Figure 14). $2n = 22$. Rich, moist woods and thickets. [*B. erectum* var. *septentrionale* Babel]

Brachypodium

BRACHYPODIUM PINNATUM (Linnaeus) P. Beauvois—(Figure 14). $2n = 18, 20, 28$. Waste areas. From Europe.

Briza

BRIZA MEDIA Linnaeus—(Figure 15). $2n = 10, 14, 28$. Roadsides, meadows, moist soil. From Europe.

BRIZA MINOR Linnaeus—(Figure 15). $2n = 10, 14$. Waste places. From Europe.

Bromus

BROMUS ARVENSIS Linnaeus—(Figure 15). $2n = 14$. Fields, roadsides. From Europe.

BROMUS BRIZIFORMIS Fischer & C. A. Meyer—Quake-grass (Figure 15). $2n = 14$. Roadsides, waste places. From Europe.

Bromus ciliatus Linnaeus—Fringed Brome (Figure 16). $2n = 14, 28, 56$. Rich, moist thickets. [*B. ciliatus* var. *intonsus* Fernald; *B. dudleyi* Fernald]

BROMUS COMMUTATUS Schrader—Hairy Chess (Figure 16).

$2n = 14, 28, 56$. Fields, roadsides, waste places. From Europe.

BROMUS ERECTUS Hudson—(Figure 16). $2n = 28-112$. Fields, roadsides. From Europe.

BROMUS HORDEACEUS Linnaeus subsp. *HORDEACEUS*—Soft Chess (Figure 16). $2n = 14, 28$. Fields, roadsides, waste places. From Europe. [*B. MOLLIS* Linnaeus]

BROMUS HORDEACEUS Linnaeus subsp. *PSEUDOTHOMINEI* (P. M. Smith) H. Scholz—(Figure 17). Low meadows, grasslands. From Europe. [*B. MOLLIS* Linnaeus forma *LEIOSTACHYS* (Hartman) Fernald]

BROMUS HORDEACEUS Linnaeus subsp. *THOMINEI* (Hardouin) Braun-Blanquet—(Figure 17). $2n = 28$. Waste places. From Europe. [*B. THOMINEI* Hardouin]

BROMUS INERMIS Leysser—Hungarian Brome (Figure 17). $2n = 28, 42, 54, 56, 70$. Fields, roadsides. From Europe. [*B. INERMIS* var. *DIVARICATUS* Rohlena]

BROMUS JAPONICUS Thunberg—Japanese Chess (Figure 17). $2n = 14, 28$. Waste places. From Eurasia. [*B. JAPONICUS* var. *PORRECTUS* Hackel]

Bromus kalmii A. Gray—(Figure 18). $2n = 14$. Basic soil in dry, rocky or sandy woods and thickets and in meadows.

Bromus latiglumis (Shear) Hitchcock—(Figure 18). $2n = 14$. Rich, alluvial woods and riverbanks. [*B. altissimus* Pursh; *B. purgans*—misapplied]

BROMUS LEPIDUS Holmberg—(Figure 18). $2n = 28$. Waste places. From the Old World.

BROMUS MARGINATUS Nees—(Figure 18). $2n = 42$. Waste places. From farther west. [*B. BREVIARISTATUS* Buckley; *B. CARINATUS*—misapplied]

Bromus pubescens Muhlenberg ex Willdenow—Canada Brome (Figure 19). $2n = 14$. Dry, open, woods in basic soil. [*B. purgans*—misapplied; *B. purgans* var. *laeviglumis* (Scribner) Swallen]

BROMUS RACEMOSUS Linnaeus—(Figure 19). $2n = 14, 28$. Waste places. From Europe.

BROMUS RIGIDUS Roth—Ripgut Grass (Figure 19). $2n = 28, 42, 56, 70$. Waste places, seaports. From Europe.

BROMUS SECALINUS Linnaeus—Cheat (Figure 19). $2n = 14, 28$. Fields, waste places, roadsides. From Europe.

BROMUS SQUARROSUS Linnaeus—(Figure 20). $2n = 14$. Waste places. From Europe.

BROMUS STERILIS Linnaeus—(Figure 20). $2n = 14, 28$. Waste places, roadsides. From Europe.

BROMUS TECTORUM Linnaeus—Downy Chess (Figure 20). $2n = 14, 28$. Fields, roadsides, waste places. From Europe.

Calamagrostis

Calamagrostis canadensis (Michaux) P. Beauvois var. *canadensis*—Bluejoint (Figure 20). $2n = 28, 42-66$. Meadows, shores, bogs, open swamps. [*C. canadensis* var. *robusta* Vasey]

Calamagrostis canadensis (Michaux) P. Beauvois var. *langsдорffii* (Link) Inman—(Figure 21). $2n = 28, 42, 56, 59$ —ca. 64. High altitudes. [*C. canadensis* var. *scabra* (J. Presl) Hitchcock; *C. nubila* Louis-Marie]

Calamagrostis canadensis (Michaux) P. Beauvois var. *macouniana* (Vasey) Stebbins—(Figure 21). Open, moist, grassy areas.

Calamagrostis cinnoides (Muhlenberg) Barton—(Figure 21). Swamps, wet woods, damp sandy or peaty soils.

CALAMAGROSTIS EPIGEJOS (Linnaeus) Roth var. *GEORGICA* (K. Koch) Ledebour—(Figure 21). $2n = 28, 42, 56, 70$. Fields, waste places. From Eurasia.

Calamagrostis pickeringii A. Gray—(Figure 22). $2n = 28$. Bogs, peaty alpine soils, shores, riverbanks. [*C. pickeringii* var. *debilis* (Kearney) Fernald & Wiegand]

Calamagrostis stricta (Timm) Koeler subsp. *stricta*—(Figure 22). $2n = 28-126$. Gravelly shores, riverbanks. [*C. neglecta* (Ehrhart) P. G. Gaertner, B. Meyer & Scherbius]

Calamagrostis stricta (Timm) Koeler subsp. *inexpansa* (A. Gray) C. W. Greene—Northern Reedgrass (Figure 22). $2n = 28, 56, 70, 84-120, 123$. Wet ledges, ridgetop soils, gravelly shores, riverbanks, usually at high altitudes. [*C. fernaldii* Louis-Marie; *C. inexpansa* A. Gray; *C. inexpansa* var. *brevior* (Vasey) Stebbins; *C. inexpansa* var. *novae-angliae* Stebbins; *C. inexpansa* var. *robusta* (Vasey) Stebbins; *C. lacustris* (Kearney) Nash]

Cenchrus

Cenchrus longispinus (Hackel) Fernald—Field Sandbur (Figure 22). $2n = 34$. Sandy fields, roadsides, railroads. [*C. pauciflorus*—misapplied]

CENCHRUS SPINIFEX Cavanilles—Coast Sandbur (Figure 23). $2n = 34$. Sandy areas. From farther south. [*C. INCERTUS* M. A. Curtis]

CENCHRUS TRIBULOIDES Linnaeus—Dune Sandbur (Figure 23). $2n = 34$. Coastal sands, especially dunes. From farther south.

Chloris

CHLORIS CUCULLATA Bischoff—(Figure 23). $2n = 40$. Wool waste. From farther west.

CHLORIS GAYANA Kunth—Rhodes Grass (Figure 23). $2n = 20, 30, 40$. Fields, waste places. From Africa.

CHLORIS VERTICILLATA Nuttall—Windmill Grass (Figure 24).
 $2n = \text{ca. } 28, 40, 63$. Roadsides. From farther west.

CHLORIS VIRGATA Swartz—Feather Fingergrass (Figure 24).
 $2n = 20, 36, 40$. Wool waste. From tropical America.

Cinna

Cinna arundinacea Linnaeus—Common Woodreed (Figure 24).
 $2n = 28$. Wet woods, swamps.

Cinna latifolia (Treviranus ex Göppert) Grisebach—Drooping
 Woodreed (Figure 24). $2n = 28, 56$. Wet woods, thickets,
 recent clearings.

Corynephorus

CORYNEPHORUS CANESCENS (Linnaeus) P. Beauvois—Gray
 Hairgrass (Figure 25). $2n = 14$. Sandy fields, roadsides, bar-
 rens. From Europe.

Crypsis

CRYPISIS SCHOENOIDES (Linnaeus) Lambert—(Figure 25). $2n$
 $= 32, 36$. Waste places. From Europe. [*HELEOCHLOA*
SCHOENOIDES (Linnaeus) Host ex Roemer]

Cynodon

CYNODON ARISTIGLUMIS Caro & E. A. Sánchez—(Figure 25).
 Waste areas. From South and Central America.

CYNODON DACTYLON (Linnaeus) Persoon—Bermuda Grass
 (Figure 25). $2n = 18, 27, 30, 36, 40, 54$. Waste places. From
 Europe.

Cynosurus

CYNOSURUS CRISTATUS Linnaeus—(Figure 26). $2n = 14$.
 Roadsides. From Europe.

Dactylis

DACTYLIS GLOMERATA Linnaeus—Orchard-grass (Figure 26).
 $2n = 14, 21, 28$. Roadsides, fields, orchards, waste places.
 From Europe. [*D. GLOMERATA* var. *CILIATA* Petermann;
D. GLOMERATA var. *DETONSA* Fries]

Dactyloctenium

DACTYLOCTENIUM AEGYPTIUM (Linnaeus) Willdenow—
 Crowfoot-grass (Figure 26). $2n = 18-24, 27, 36-48, 52$.
 Waste and cultivated land. From the Old World tropics.

Danthonia

Danthonia compressa Austin—(Figure 26). $2n = 36$. Dry, open
 woodlands, clearings. [*D. alleni* Austin]

Danthonia spicata (Linnaeus) P. Beauvois—Poverty Oat-grass
 (Figure 27). $2n = 36$. Dry, sterile soil. [*D. spicata* var. *longipila*
 Scribner & Merrill; *D. spicata* var. *pinetorum* Piper]

Deschampsia

Deschampsia cespitosa (Linnaeus) P. Beauvois—Tufted Hairgrass
 (Figure 27). $2n = 18, 24-28, 49, 52, 56$. Meadows, fields,
 riverbanks, gravelly shores. [*D. cespitosa* var. *glauca* (Hart-
 man) Lindman f.; *D. CESPITOSA* var. *PARVIFLORA*
 (Thuiller) Cosson & Germain de Saint Pierre (possibly mis-
 applied)]

DESCHAMPSIA DANTHONIOIDES (Trinius) Munro ex Ben-
 tham—Annual Hairgrass (Figure 27). $2n = 26$. Wool waste.
 From farther west.

Deschampsia flexuosa (Linnaeus) Trinius—Common Hairgrass
 (Figure 27). $2n = 14, 26, 28, 32, 42, 56$. Dry open soil,
 ledges.

Desmazeria

DESMAZERIA RIGIDA (Linnaeus) Tutin—(Figure 28). $2n = 14, 28$. Waste places. From Europe. [*SCLEROPOA RIGIDA* (Linnaeus) Grisebach]

Digitaria

Digitaria cognata (Schultes) Pilger—Fall Witchgrass (Figure 28). $2n = 36, 70, 72$. Dry, sandy soil near rivers. [*Leptoloma cognatum* (Schultes) Chase]

Digitaria filiformis (Linnaeus) Koeler—Slender Crabgrass (Figure 28). $2n = 36, 54$. Dry, gravelly or sandy, open soil.

DIGITARIA ISCHAEMUM (Schreber) Muhlenberg—Smooth Crabgrass (Figure 28). $2n = 36, 45$. Rail yards, dry, sandy soil, waste ground. From Eurasia.

DIGITARIA SANGUINALIS (Linnaeus) Scopoli—Common Crabgrass (Figure 29). $2n = 18-76$. Yards, gardens, waste places, roadsides. From Europe.

DIGITARIA VIOLASCENS Link—(Figure 29). $2n = 18, 36$. Old fields. From farther south.

—*Digitaria* hybrids—

DIGITARIA ISCHAEMUM (Schreber) Muhlenberg \times *D. SANGUINALIS* (Linnaeus) Scopoli—(Figure 29).

Distichlis

Distichlis spicata (Linnaeus) Greene—Seashore Saltgrass (Figure 29). $2n = 40$. Salt marshes.

Echinochloa

ECHINOCHLOA COLONA (Linnaeus) Link—Jungle-rice (Figure 30). $2n = 30, 32, 36, 48, 52, 54, 56, 72, 96$. Waste places, cultivated fields, ditches. From the Old World tropics.

ECHINOCHLOA CRUSGALLI (Linnaeus) P. Beauvois—Barn-

yard-grass (Figure 30). $2n = 18, 36, 48, 54, 56, 72$. Roadsides, waste places, cultivated ground. From the Old World.

ECHINOCHLOA FRUMENTACEA Link—Japanese Millet (Figure 30). $2n = 48, 54$. Waste ground, roadsides, fields. From eastern Asia. [*E. CRUSGALLI* (Linnaeus) P. Beauvois var. *FRUMENTACEA* (Link) W. F. Wight]

Echinochloa muricata (P. Beauvois) Fernald var. *muricata*—(Figure 30). $2n = 36, 48$. Marshes, shores, waste places, roadsides. [*E. pungens* (Poiret) Rydberg]

Echinochloa muricata (P. Beauvois) Fernald var. *microstachya* Wiegand—(Figure 31). $2n = 36$. Marshes, shores, waste places, roadsides. [*E. muricata* var. *occidentalis* Wiegand; *E. pungens* (Poiret) Rydberg var. *microstachya* (Wiegand) Fernald & Griscom; *E. pungens* var. *wiegandii* Fassett]

Echinochloa walteri (Pursh) Heller—(Figure 31). $2n = 36$. Shores, salt marsh borders, wet places.

Eleusine

ELEUSINE INDICA (Linnaeus) Gaertner—Wiregrass (Figure 31). $2n = 18, 36, 54$. Waste places, yards. From the Old World.

Elymus

Elymus canadensis Linnaeus—Canada Wild Rye (Figure 31). $2n = 14, 28, 42$. Dry, sandy, gravelly, or rocky soil, railroads.

Elymus glabriflorus (Vasey) Scribner & C. R. Ball—(Figure 32). $2n = 28$. Rich thickets and alluvium. [*E. virginicus* Linnaeus var. *glabriflorus* (Vasey) Bush]

Elymus hystrix Linnaeus—Bottlebrush-grass (Figure 32). $2n = 28$. Rich woods and thickets. [*Hystrix patula* Moench; *Hystrix patula* var. *bigeloviana* (Fernald) Deam]

ELYMUS PYCNANTHUS (Godron) Melderis—(Figure 32). $2n =$

42. Salt marshes, sandy shores. From Europe. [*AGROPYRON PUNGENS*—misapplied; *AGROPYRON PUNGENS* (Persoon) Roemer & Schultes var. *ACADIENSE* (F. T. Hubbard) Fernald; *AGROPYRON PYCNANTHUM* (Godron) Godron & Grenier; *ELYTRIGIA PUNGENS* (Persoon) Tutin]

ELYMUS REPENS (Linnaeus) Gould—Quackgrass (Figure 32). $2n = 21, 28, 42, 63$. Roadsides, waste places, fields. From Eurasia. [*AGROPYRON REPENS* (Linnaeus) P. Beauvois; *AGROPYRON REPENS* var. *SUBULATUM* (Schreber) Roemer & Schultes; *ELYTRIGIA REPENS* (Linnaeus) Desvaux ex W. D. Jackson]

Elymus riparius Wiegand—(Figure 33). $2n = 28$. Moist woods, stream banks.

Elymus submuticus (Hooker) Smyth & Smyth—(Figure 33). $2n = 28, 42$. Rich thickets, alluvium. [*E. virginicus* Linnaeus var. *submuticus* Hooker]

Elymus trachycaulus (Link) Gould ex Shinnars subsp. *trachycaulus*—Slender Wheatgrass (Figure 33). $2n = 28$. Open soils. [*Agropyron trachycaulum* (Link) Malte ex H. F. Lewis var. *trachycaulum*; *Agropyron trachycaulum* var. *glaucum* (Pease & Moore) Malte; *Agropyron trachycaulum* var. *majus* (Vasey) Fernald; *Agropyron trachycaulum* var. *novae-angliae* (Scribner) Fernald]

Elymus villosus Muhlenberg ex Willdenow—(Figure 33). $2n = 28$. Rich woods, thickets, shores.

Elymus virginicus Linnaeus var. *virginicus*—(Figure 34). $2n = 28$. Shores, rich thickets. [*E. virginicus* var. *australis* (Scribner & C. R. Ball) Hitchcock; *E. virginicus* var. *intermedius* (Vasey) Bush; *E. virginicus* var. *jejunus* (Ramaley) Bush]

Elymus virginicus Linnaeus var. *halophilus* (Bicknell) Wiegand—(Figure 34). Seacoast.

Elymus wiegandii Fernald—(Figure 34). $2n = 28$. Alluvial soil, riverbanks, rich woods.

Eragrostis

Eragrostis capillaris (Linnaeus) Nees—Lacegrass (Figure 34). $2n = 100$. Dry, sandy or rocky soil, roadsides.

ERAGROSTIS CILIANENSIS (Allioni) Vignolo-Lutati ex Janchen—Stinkgrass (Figure 35). $2n = 20, 40$. Wasteland, cultivated fields, railroads. From Europe. [*E. MEGASTACHYA* (Koeler) Link]

ERAGROSTIS CURVULA (Schrader) Nees—Weeping Lovegrass (Figure 35). $2n = 20, 40, 50, 60, 70, 80$. Waste areas. From South Africa.

ERAGROSTIS DIFFUSA Buckley— $2n = 60$. Waste places, fields. From farther west. [A specimen from Calais in Washington County, Maine, collected by Arthur Gilman and identified as *E. pectinacea* has been re-identified as *E. diffusa* too late to be mapped. Some recent works such as Davidse (1994) synonymize this taxon with *E. pectinacea*.]

Eragrostis frankii C. A. Meyer—(Figure 35). $2n = 40, 80$. Sandy riverbanks, roadsides.

Eragrostis hypnoides (Lambert) Britton, Sterns & Poggenburg—Creeping Lovegrass (Figure 35). $2n = 20, 40$. Gravelly or sandy shores.

ERAGROSTIS INTERMEDIA Hitchcock—Plains Lovegrass (Figure 36). $2n = 60, 72, \text{ca. } 74, 76, 80, 100, \text{ca. } 108, 120$. Dry slopes. From farther south and west.

ERAGROSTIS MEXICANA Hornemann subsp. *VIRESCENS* (J. Presl) S. D. Koch & Sánchez—(Figure 36). $2n = 60$. Ballast. From South America. [*E. VIRESCENS* J. Presl]

ERAGROSTIS MINOR Host—(Figure 36). $2n = 20, 40, 44, 60, 80$. Roadsides, railroads, waste places. From Europe. [*E. POOIDES* P. Beauvois ex Roemer & Schultes]

Eragrostis pectinacea (Michaux) Nees ex Steudel—(Figure 36). $2n = 40, 60, 80$. Roadsides, railroads, waste places.

ERAGROSTIS PILOSA (Linnaeus) P. Beauvois—India Lovegrass (Figure 37). $2n = 20, 30, 40, 50, 60, 72$. Roadsides, railroads, barnyards, sandy places. From eastern Asia. [*E. MULTICAULIS* Steudel]

Eragrostis spectabilis (Pursh) Steudel—Purple Lovegrass (Figure 37). $2n = 20, 40$. Coastal sands, dry sterile soil. [*E. spectabilis* var. *sparsihirsuta* Farwell]

Eremochloa

EREMOCHLOA OPHIUROIDES (Munro) Hackel—Centipede Grass (Figure 37). $2n = 18$. From Southeast Asia.

Festuca

Festuca brachyphylla Schultes & Schultes f.—Alpine Fescue (Figure 37). $2n = 28, 42$. Rocky summits at high altitudes. [*F. ovina* Linnaeus var. *brachyphylla* (Schultes & Schultes f.) Piper ex Hitchcock]

FESTUCA FILIFORMIS Pourret—Hair Fescue (Figure 38). $2n = 14, 28$. Dry fields. From Europe. [*F. CAPILLATA* Lamarck; *F. OVINA* Linnaeus var. *CAPILLATA* (Lamarck) Alefeld]

FESTUCA HETEROMALLA Pourret—(Figure 38). $2n = 42, 56, 70$. Damp soil, cart roads, disturbed sites. From Europe. [*F. rubra* Linnaeus var. *multiflora* (Hoffmann) Ascherson & Graebner]

FESTUCA NIGRESCENS Lamarck—Chewing's Fescue (Figure 38). $2n = 28, 42$. Roadsides, ditches, dry open areas. From Europe. [*F. rubra* Linnaeus var. *commutata* Gaudin]

FESTUCA OVINA Linnaeus—Sheep Fescue (Figure 38). $2n = 14, 21, 28, 42, 70$. Dry sterile soil. From Europe.

Festuca prolifera (Piper) Fernald—(Figure 39). $2n = 49, 50, 63, \text{ca. } 70$. Summits of high mountains.

FESTUCA RUBRA Linnaeus subsp. *RUBRA*—Red Fescue (Fig-

ure 39). $2n = 14, 42, 44, 56$. Fields, roadsides, salt marshes, open habitats. From Eurasia. [*F. RUBRA* var. *JUNCEA* (Hackel) Richter]

Festuca saximontana Rydberg—Rocky Mountain Fescue (Figure 39). $2n = 42, 36$. Mountain crests. [*F. brachyphylla* Schultes & Schultes f. var. *rydbergii* (St.-Yves) Cronquist; *F. ovina* Linnaeus var. *saximontana* (Rydberg) Gleason]

Festuca subverticillata (Persoon) E. B. Alexeev—Nodding Fescue (Figure 39). $2n = 42$. Rich woods. [*F. obtusa* Biehler]

FESTUCA TRACHYPHYLLA (Hackel) Krajina—Hard Fescue (Figure 40). $2n = 14, 28, 42$. Fields. From Europe. [*F. OVI-NA* Linnaeus var. *DURIUSCULA*—misapplied]

Gastridium

GASTRIDIDIUM PHLEOIDES (Nees & Meyen) C. E. Hubbard—(Figure 40). $2n = 28$. Wool waste, rubbish. From southwestern Asia and northeastern Africa. [Commonly identified as *G. ventricosum* (Gouan) Schinz & Thellung]

Glyceria

Glyceria acutiflora Torrey—(Figure 40). $2n = 20, 40$. Shallow water of pools, ponds, and streams.

Glyceria borealis (Nash) Batchelder—Northern Manna-grass (Figure 40). $2n = 20$. Shallow water, wet places.

Glyceria canadensis (Michaux) Trinius—Rattlesnake Grass (Figure 41). $2n = 60$. Swamps, wet woods, shores.

Glyceria fluitans (Linnaeus) R. Brown—Float-grass (Figure 41). $2n = 20, 40$. Shallow water.

Glyceria grandis S. Watson—Reed Meadow Grass (Figure 41). $2n = 20$. Swamps, ditches, shores.

GLYCERIA MAXIMA (Hartman) Holmberg—(Figure 41). $2n = 56, 60$. Ditches. From Eurasia. [*G. SPECTABILIS* Mertens & Koch]

Glyceria melicaria (Michaux) F. T. Hubbard—(Figure 42). $2n = 40$. Wet woods.

Glyceria obtusa (Muhlenberg) Trinius—(Figure 42). $2n = 40$. Wet sandy soils, swamps, wet woods.

Glyceria septentrionalis Hitchcock—Floating Manna-grass (Figure 42). $2n = 20, 40$. Swamps, shores, meadows.

Glyceria striata (Lamarck) Hitchcock—Fowl Meadow Grass (Figure 42). $2n = 20$. Wet places. [*G. striata* var. *stricta* (Scribner) Fernald]

—*Glyceria* hybrids—

Glyceria acutiflora Torrey \times *G. septentrionalis* Hitchcock—(Figure 43). Shallow water sloughs in meadows.

Glyceria \times *laxa* (Scribner) Scribner—(Figure 43). $2n = 42, 46$. Swampy woods. [*G. canadensis* (Michaux) Trinius var. *laxa* (Scribner) Hitchcock] Parentage uncertain.

Hierochloë

Hierochloë alpina (Swartz ex Willdenow) Roemer & Schultes subsp. *orthantha* (Sørensen) G. Weim—Alpine Sweetgrass (Figure 43). $2n = 56-78$. Siliceous rock and dry peat at high altitudes.

Hierochloë odorata (Linnaeus) P. Beauvois—Sweetgrass (Figure 43). $2n = 28, 42, 49, 56$. Meadows, shores, salt marshes.

Holcus

HOLCUS LANATUS Linnaeus—Velvet Grass (Figure 44). $2n = 14, 28$. Meadows, roadsides, sterile fields. From Europe.

HOLCUS MOLLIS Linnaeus—(Figure 44). $2n = 14, 28, 35, 42, 49$. Wasteland. From Europe.

Hordeum

Hordeum jubatum Linnaeus—Squirrel-tail Grass (Figure 44). $2n = 14, 28, 42, 56$. Roadsides, railroads, salt marshes, beaches.

HORDEUM MURINUM Linnaeus subsp. *LEPORINUM* (Link) Arcangeli—(Figure 44). $2n = 14, 28, 42$. Moist waste places. From Europe. [*H. LEPORINUM* Link]

HORDEUM PUSILLUM Nuttall—Little Barley (Figure 45). $2n = 14$. Roadsides, marsh borders. From farther south.

HORDEUM VULGARE Linnaeus—Barley (Figure 45). $2n = 7, 14, 15, 28, 42$. Waste areas, roadsides. From Europe. [*H. VULGARE* var. *TRIFURCATUM* (Schlechtendal) Alefeld]

Koeleria

KOELERIA MACRANTHA (Ledebour) Schultes—Junegrass (Figure 45). $2n = 14, 15, 16, 28, 42, 56, 70, 84$. Dry soil, sands, open woods. From farther west. [*K. CRISTATA*—illegitimate name; *K. PYRAMIDATA*—misapplied]

Leersia

Leersia oryzoides (Linnaeus) Swartz—Rice Cutgrass (Figure 45). $2n = 48$. Swamps, shores, ditches.

Leersia virginica Willdenow—Whitegrass (Figure 46). $2n = 48$. Shaded riverbanks, moist woods, damp thickets. [*L. virginica* var. *ovata* (Poiret) Fernald]

Leptochloa

Leptochloa fascicularis (Lambert) A. Gray—(Figure 46). $2n = 20, 40$. Salt marshes and seacoasts. [*L. fascicularis* var. *acuminata* (Nash) Gleason; *L. fascicularis* var. *maritima* (Bicknell) Gleason; *Diplachne acuminata* Nash; *Diplachne maritima* Bicknell]

LEPTOCHLOA PANICEA (Retzius) Ohwi subsp. *MUCRONATA* (Michaux) Nowack—Red Sprangletop (Figure 46). $2n = 20$.

Gardens, fields. From farther south. [*L. FILIFORMIS* (Lambert) P. Beauvois; *L. MUCRONATA* (Michaux) Kunth]

Leymus

Leymus mollis (Trinius) Pilger—American Dunegrass (Figure 46). $2n = 28, 56$. Sea beaches. [*Elymus arenarius* Linnaeus var. *villosus* Meyer; *Elymus mollis* Trinius]

Lolium

LOLIUM ARUNDINACEUM (Schreber) Darbyshire—Reed Fescue (Figure 47). $2n = 28, 42, 56, 63, 70$. Roadsides, meadows. From Europe. [*FESTUCA ARUNDINACEA* Schreber; *FESTUCA ELATIOR* Linnaeus in part; *FESTUCA PRATENSIS*—misapplied]

LOLIUM GIGANTEUM (Linnaeus) Darbyshire—(Figure 47). $2n = 42$. Waste places. From Europe. [*FESTUCA GIGANTEA* (Linnaeus) Villars]

LOLIUM MULTIFLORUM Lambert—Italian Ryegrass (Figure 47). $2n = 14$. Fields, roadsides. From Europe. [*L. MULTIFLORUM* var. *DIMINUTUM* Mutel; *L. PERENNE* Linnaeus var. *ARISTATUM* Willdenow]

LOLIUM PERENNE Linnaeus—Ryegrass (Figure 47). $2n = 14, 28$. Fields, roadsides. From Europe.

LOLIUM PRATENSE (Hudson) Darbyshire—Meadow Fescue (Figure 48). $2n = 14, 28$. Fields, roadsides. From Europe. [*FESTUCA PRATENSIS* Hudson; *FESTUCA ELATIOR* Linnaeus in part]

LOLIUM TEMULENTUM Linnaeus—Darnel (Figure 48). $2n = 14$. Waste places. From Europe.

Lycurus

LYCURUS PHLEOIDES Kunth—Wolftail (Figure 48). $2n = 40$. Wool waste. From farther west.

Mibora

MIBORA MINIMA (Linnaeus) Desvaux—(Figure 48). $2n = 14$. Nurseries. From Europe.

Microstegium

MICROSTEGIUM VIMINEUM (Trinius) A. Camus—(Figure 49). $2n = 40$. Roadsides. From tropical Asia.

Milium

Milium effusum Linnaeus—(Figure 49). $2n = 14, 26, 28$. Rich woods.

Miscanthus

MISCANTHUS SACCHARIFLORUS (Maximowicz) Hackel—Amur Silvergrass (Figure 49). $2n = 38-95$. Roadsides, waste places. From eastern Asia.

MISCANTHUS SINENSIS Andersson—Eulalia (Figure 49). $2n = 35-57$. Roadsides, old fields. From China.

Molinia

MOLINIA CAERULEA (Linnaeus) Moench—Moorgrass (Figure 50). $2n = 18, 36, 90$. Dry fields. From Europe.

Muhlenbergia

Muhlenbergia capillaris (Lamarck) Trinius—Hairgrass (Figure 50). Dry, exposed ledges.

Muhlenbergia frondosa (Poiret) Fernald—(Figure 50). $2n = 40$. Damp, open woods, shores.

Muhlenbergia glomerata (Willdenow) Trinius—Marsh Muhly (Figure 50). $2n = 20$. Swamps, meadows, bogs. [*M. glomerata* var. *cinnoides* (Link) F. J. Hermann]

Muhlenbergia mexicana (Linnaeus) Trinius—(Figure 51). $2n = 40$. Shores, wet woods, roadsides.

MUHLENBERGIA RACEMOSA (Michaux) Britton, Sterns & Poggenburg—(Figure 51). $2n = 40$. Dry soil, railroads. From farther west.

Muhlenbergia richardsonis (Trinius) Rydberg—Mat Muhly (Figure 51). $2n = 40$. Gravelly river shores.

Muhlenbergia schreberi J. F. Gmelin—Nimble Will (Figure 51). $2n = 20, 40$. Disturbed, damp or wet places, lawns, gardens, roadsides.

Muhlenbergia sobolifera (Muhlenberg) Trinius—(Figure 52). $2n = 40$. Dry woods (often rocky and calcareous).

Muhlenbergia sylvatica Torrey—(Figure 52). $2n = 40$. Gravelly shores, rich woods. [*M. sylvatica* var. *robusta* Fernald]

Muhlenbergia tenuiflora (Willdenow) Britton, Sterns & Poggenburg—(Figure 52). $2n = 40$. Rocky woods, shaded cliffs.

Muhlenbergia uniflora (Muhlenberg) Fernald—(Figure 52). $2n = \text{ca. } 42$. Bogs, meadows, sandy shores, roadsides.

Nardus

NARDUS STRICTA Linnaeus—Moor Matgrass (Figure 53). $2n = 16, 26, 27, \text{ca. } 28, 30$. Old fields, grassy riverbanks. From Europe.

Oryzopsis

Oryzopsis asperifolia Michaux—(Figure 53). $2n = 46, 48$. Dry woods.

Oryzopsis canadensis (Poiret) Torrey—(Figure 53). $2n = 22$. Dry, sandy or rocky woods.

Oryzopsis pungens (Torrey ex Sprengel) Hitchcock—(Figure 53). $2n = 22, 24$. Dry, sandy or rocky woods.

Panicum

Panicum acuminatum Swartz var. *acuminatum*—(Figure 54). $2n = 18$. Dry sand or beaches. [*P. auburne* Ashe; *P. lanuginosum* Elliott]

Panicum acuminatum Swartz var. *fasciculatum* (Torrey) A. A. Beetle—(Figure 54). $2n = 18$. Thin, dry woodlands, dry or moist sterile soil in the open. [*P. huachucae* Ashe var. *fasciculatum* (Torrey) F. T. Hubbard; *P. implicatum* Scribner; *P. lanuginosum* Elliott var. *fasciculatum* (Torrey) Fernald; *P. lanuginosum* var. *implicatum* (Scribner) Fernald; *P. lanuginosum* var. *tennesseense* (Ashe) Gleason; *P. subvillosum* Ashe; *P. tennesseense* Ashe]

Panicum acuminatum Swartz var. *lindheimeri* (Nash) A. A. Beetle—(Figure 54). $2n = 18$. Thin, dry woodlands, dry or moist sterile soil in the open. [*P. lanuginosum* Elliott var. *lindheimeri* (Nash) Fernald; *P. lanuginosum* var. *septentrionale* Fernald; *P. lindheimeri* Nash]

Panicum amarum Elliott var. *amarum*—(Figure 54). $2n = 54$. Sandy coasts.

Panicum amarum var. *amarulum* (Hitchcock & Chase) P. Palmer—(Figure 55). $2n = 36$. Sea beaches. [*P. amarulum* Hitchcock & Chase]

Panicum boreale Nash—(Figure 55). $2n = 18$. Shores, meadows, moist woods, fields. [*P. bicknellii* Nash var. *bicknellii*; *P. bicknellii* var. *calliphyllum* (Ashe) Gleason; *P. calliphyllum* Ashe]

Panicum boscii Poiret—(Figure 55). $2n = 18, 36$. Dry woods. [*P. boscii* var. *molle* (Vasey) Hitchcock & Chase]

Panicum capillare Linnaeus—Witchgrass (Figure 55). $2n = 18$. Open sandy or stony soil, roadsides, waste places, cultivated land. [*P. capillare* var. *agreste* Gattinger; *P. capillare* var. *occidentale* Rydberg]

Panicum clandestinum Linnaeus—(Figure 56). $2n = 36$. Thickets, shores, alluvial woods borders.

Panicum columbianum Scribner—(Figure 56). $2n = 18$. Sandy open ground, thin woods. [*P. columbianum* var. *oricola* (Hitchcock & Chase) Fernald; *P. columbianum* var. *thinium* Hitchcock & Chase; *P. tsugetorum* Nash]

Panicum commutatum Schultes var. *commutatum*. $2n = 18$. Open woods, open sandy or rocky places. [*P. divergens* Kunth] This taxon is not mapped since we did not distinguish between the varieties of *P. commutatum* when we recorded specimen data.

Panicum commutatum Schultes var. *ashei* (G. Pearson ex Ashe) Fernald—(Figure 56). $2n = 18$. Dry, open woods, openings. [*P. ashei* G. Pearson ex Ashe]

Panicum depauperatum Muhlenberg—(Figure 56). $2n = 18$. Dry or sandy soil, open woods. [*P. depauperatum* var. *involutum* (Torrey) Wood; *P. depauperatum* var. *psilophyllum* Fernald]

Panicum dichotomiflorum Michaux var. *dichotomiflorum*—Fall Panicum (Figure 57). $2n = 36, 54$. Moist soil, shores, roadsides, railroads, waste areas. [*P. dichotomiflorum* var. *geniculatum* (Wood) Fernald]

Panicum dichotomiflorum Michaux var. *puritanorum* Svenson—(Figure 57). Damp sands, pond margins.

Panicum dichotomum Linnaeus var. *dichotomum*—(Figure 57). $2n = 18$. Dry, open woods. [*P. dichotomum* var. *barbulatum* (Michaux) Wood; *P. barbulatum* Michaux]

Panicum dichotomum Linnaeus var. *lucidum* (Ashe) Lelong—(Figure 57). $2n = 18$. Rocky woods. [*P. lucidum* Ashe]

Panicum dichotomum Linnaeus var. *mattamuskeetense* (Ashe) Lelong—(Figure 58). $2n = 18$. [*P. annulum* Ashe; *P. annulum* Ashe var. *glabrescens* Gleason; *P. clutei* Nash; *P. matta-*

muskeetense Ashe; *P. mattamuskeetense* Ashe var. *clutei* (Nash) Fernald]

Panicum flexile (Gattinger) Scribner—(Figure 58). $2n = 18$. Shores in calcareous areas.

Panicum gattingeri Nash—(Figure 58). $2n = 18$. Sandy areas, roadsides, fields, wood borders. [*P. capillare* Linnaeus var. *campestre* Gattinger]

Panicum latifolium Linnaeus—(Figure 58). $2n = 18$. Open, usually dry, woods.

Panicum linearifolium Scribner—(Figure 59). $2n = 18$. Dry soil, open woods, slopes. [*P. linearifolium* var. *weneri* (Scribner) Fernald; *P. weneri* Scribner]

Panicum meridionale Ashe—(Figure 59). $2n = 18$. Dry, open habitats. [*P. meridionale* var. *albemarlense* (Ashe) Fernald; *P. albemarlense* Ashe]

Panicum microcarpon Muhlenberg ex Elliott—(Figure 59). $2n = 18$. Woodlands, openings. [*P. nitidum* Lamarck var. *ramulosum* Torrey]

PANICUM MILIACEUM Linnaeus—Broom-corn Millet (Figure 59). $2n = 36, 54, 72$. Roadsides, waste places. From the Old World.

Panicum oligosanthos Schultes var. *oligosanthos*—(Figure 60). $2n = 18$. Dry, open soil.

Panicum oligosanthos Schultes var. *scribnerianum* (Nash) Fernald—(Figure 60). $2n = 18$. Dry, open soil. [*P. scribnerianum* Nash]

Panicum ovale Elliott var. *pseudopubescens* (Nash) Lelong—(Figure 60). $2n = 18$. Dry, sandy woods. [*P. addisonii* Nash; *P. commonsianum* Ashe var. *commonsianum*; *P. commonsianum* var. *addisonii* (Nash) Fernald; *P. pseudopubescens*

Nash; *P. villosissimum* Nash var. *pseudopubescens* (Nash) Fernald]

Panicum philadelphicum Bernhardt ex Trinius—(Figure 60). $2n = 18$. Shores, woods, roadsides. [*P. tuckermanii* Fernald]

Panicum polyanthes Schultes—(Figure 61). $2n = 18$. Dry woods. [The identity of all New England voucher specimens is open to question.]

Panicum rigidulum Bose ex Nees var. *rigidulum*—(Figure 61). $2n = 18$. Shores, meadows. [*P. rigidulum* var. *condensum* (Nash) F. Seymour; *P. agrostoides* Sprengel var. *agrostoides*; *P. agrostoides* var. *condensum* (Nash) Fernald; *P. condensum* Nash]

Panicum rigidulum Bose ex Nees var. *elongatum* (Pursh) Long—(Figure 61). $2n = 18$. Swamps, shores, meadows. [*P. stipitatum* Nash]

Panicum rigidulum Bosc ex Nees var. *pubescens* (Vasey) Long—(Figure 61). $2n = 18$. Shores, meadows, bogs. [*P. longifolium* Torrey]

Panicum scabriusculum Elliott—(Figure 62). $2n = 18$. Moist open ground. [*P. aculeatum* Hitchcock & Chase; *P. recognitum* Fernald]

Panicum scoparium Lamarck—Velvet Panic-grass (Figure 62). $2n = 18$. Damp soil.

Panicum sphaerocarpon Elliott—(Figure 62). $2n = 18$. Dry fields and woods, beaches.

Panicum spretum Schultes—(Figure 62). $2n = 18$. Shores, meadows.

Panicum verrucosum Muhlenberg—(Figure 63). $2n = 36$. Moist soil, shores.

Panicum villosissimum Nash—(Figure 63). $2n = 18$. Open woods.

Panicum virgatum Linnaeus—Switchgrass (Figure 63). $2n = 18-154$. Dry soil, sandy or gravelly shores, fields. [*P. virgatum* var. *cubense* Grisebach; *P. virgatum* var. *spissum* Linder]

Panicum wrightianum Scribner—(Figure 63). $2n = 18$. Pond shores.

Panicum xanthophysum A. Gray—(Figure 64). $2n = 36$. Sandy, open woods and clearings.

—*Panicum* hybrids—

Panicum dichotomum Linnaeus \times *P. latifolium* Linnaeus—(Figure 64).

Panicum \times *scoparioides* (Ashe) Mohlenbrock—(Figure 64). $2n = 18$. Open woods. [*P. acuminatum* Swartz \times *P. oligosanthos* Schultes; *P. villosissimum* Nash var. *scoparioides* (Ashe) Fernald]

Pappophorum

PAPPOPHORUM VAGINATUM Buckley—(Figure 64). $2n = 60$. Wool waste. From farther south and west. [*P. MUCRONULATUM*—misapplied]

Pascopyrum

PASCOPYRUM SMITHII (Rydberg) Á. Löve—Western Wheatgrass (Figure 65). $2n = 56$. Railroads. From farther west. [*AGROPYRON SMITHII* Rydberg; *ELYTRIGIA SMITHII* (Rydberg) Nevski]

Paspalum

Paspalum laeve Michaux—(Figure 65). $2n = 40, 58, 80$. Meadows, shores, damp sandy fields. [*P. laeve* var. *circulare* (Nash) Fernald; *P. laeve* var. *pilosum* Scribner; *P. circulare* Nash; *P. longipilum* Nash]

Paspalum setaceum Michaux var. *setaceum*—(Figure 65). $2n = 20, 40, 50$. Sandy fields.

Paspalum setaceum Michaux var. *muhlenbergii* (Nash) D. J. Banks—(Figure 65). $2n = 20, 40, 50$. Dry fields, pastures. [*P. ciliatifolium* Michaux var. *muhlenbergii* (Nash) Fernald; *P. pubescens* Muhlenberg]

Paspalum setaceum Michaux var. *psammophilum* (Nash) D. J. Banks—(Figure 66). $2n = 20, 40, 50$. Dry, sandy fields near the coast. [*P. psammophilum* Nash]

Phalaris

Phalaris arundinacea Linnaeus—Reed Canary-grass (Figure 66). $2n = 14, 28, 35, 42, 48$. Shores, wet meadows.

PHALARIS CANARIENSIS Linnaeus—Canary-grass (Figure 66). $2n = 12$. Roadsides, railroads, waste places. From Europe.

Phleum

Phleum alpinum Linnaeus—Mountain Timothy (Figure 66). $2n = 14, 28$. High altitudes.

PHLEUM ARENARIUM Linnaeus—(Figure 67). $2n = 14$. Waste areas, ballast. From Europe and North Africa.

PHLEUM PRATENSE Linnaeus—Timothy (Figure 67). $2n = 14, 21, 28-84$. Fields, roadsides. From Eurasia. [*P. PRATENSE* var. *NODOSUM* (Linnaeus) Hudson]

PHLEUM SUBULATUM (Savi) Ascherson & Graebner—(Figure 67). $2n = 14$. Waste areas, ballast. From the Mediterranean.

Phragmites

Phragmites australis (Cavanilles) Trinius ex Steudel—Common Reed (Figure 67). $2n = 36, 40, 42-59, 72, 84, 96$. Marshes, shores, ditches. [*P. communis* Trinius var. *communis*; *P. communis* var. *berlandieri* (Fournier) Fernald]

Phyllostachys

PHYLLOSTACHYS DULCIS McClure—Sweetshoot Bamboo (Figure 68). Barnyards. From China.

Piptatherum

Piptatherum racemosum (Smith) Eaton—Black Mountain-rice (Figure 68). $2n = 46, 48$. Dry, often calcareous, rocky woods. [*Oryzopsis racemosa* (Smith) Ricker]

Piptochaetium

Piptochaetium avenaceum (Linnaeus) Parodi—Black Oat-grass (Figure 68). $2n = 22, 28$. Dry openings, open woods. [*Stipa avenacea* Linnaeus]

Poa

Poa alsodes A. Gray—(Figure 68). Alluvial woods.

POA ANNUA Linnaeus—Annual Bluegrass (Figure 69). $2n = 14, 24-26, 28, 52$. Roadsides, cultivated fields, waste places. From Eurasia.

POA BULBOSA Linnaeus—Bulbous Bluegrass (Figure 69). $2n = 14, 21, 24, 28, 31-58$. Lawns, dry fields. From Eurasia.

POA CHAPMANIANA Scribner—(Figure 69). Cultivated fields, weedy places. From farther south and west.

POA COMPRESSA. Linnaeus—Canada Bluegrass (Figure 69). $2n = 14-56$. Dry soil, roadsides, waste places. From Eurasia.

Poa glauca Vahl—(Figure 70). $2n = 42-78$. Alpine meadows and ravines.

Poa laxa Haenke subsp. *fernaldiana* (Nannfeldt) N. Hylander—(Figure 70). $2n = 42$. Alpine meadows. [*P. fernaldiana* Nannfeldt]

POA NEMORALIS Linnaeus subsp. *NEMORALIS*—Wood Bluegrass (Figure 70). $2n = 14, 28-70$. Dry woods, roadsides. From Europe.

Poa palustris Linnaeus—Fowl Meadow-grass (Figure 70). $2n = 28, 30, 32, 42$. Moist woods, shores, swamps, meadows.

POA PRATENSIS Linnaeus subsp. *PRATENSIS*—Kentucky Bluegrass (Figure 71). $2n = 14, 21, 25-124$. Roadsides, fields, meadows. From Europe.

Poa pratensis Linnaeus subsp. *alpigena* (Fries ex Blytt) Hiitonen—(Figure 71). $2n = 28-127$. Alpine regions. [*P. alpigena* (Fries ex Blytt) Lindman f.; *P. arctica*—misapplied]

POA PRATENSIS Linnaeus subsp. *ANGUSTIFOLIA* (Linnaeus) Arcangeli. $2n = 46-72$. Dry soil in the open. From Europe. [*P. ANGUSTIFOLIA* Linnaeus] This taxon is not mapped since we did not distinguish between the subspecies *PRATENSIS* and *ANGUSTIFOLIA* of *P. PRATENSIS* when we recorded specimen data.

Poa saltuensis Fernald & Wiegand—(Figure 71). $2n = 28$. Rich, usually dry, woods. [*P. saltuensis* var. *microlepis* Fernald; *P. languida* Hitchcock]

POA TRIVIALIS Linnaeus—Rough Bluegrass (Figure 71). $2n = 14, 28, 72$. Springheads, brook sides, glades. From Eurasia.

Polypogon

POLYPOGON MONSPELIENSIS (Linnaeus) Desfontaines—Rabbitfoot Grass (Figure 72). $2n = 14, 26, 28, 35, 42$. Wool waste, waste places. From Europe.

Puccinellia

PUCCINELLIA DISTANS (Linnaeus) Parlatore subsp. *DISTANS*—(Figure 72). $2n = 14, 28, 42$. Roadsides, waste places. From Europe.

PUCCINELLIA DISTANS (Linnaeus) Parlatore subsp. *BOREALIS* (Holmberg) W. E. Hughes—(Figure 72). $2n = 42$. Roadsides, waste places. From Europe. [*P. DISTANS* var. *ANGUSTIFOLIA* (Blytt) Holmberg]

Puccinellia fasciculata (Torrey) Bicknell—(Figure 72). $2n = 14, 28, 42$. Salt marshes, brackish shores, sandy seashores.

Puccinellia laurentiana Fernald & Weatherby—(Figure 73). $2n = 56$. Gravelly seashores.

Puccinellia maritima (Hudson) Parlato—(Figure 73). $2n = 14-77$. Salt marshes, brackish shores.

Puccinellia Nuttalliana (Schultes) Hitchcock—(Figure 73). $2n = 28, 42, 56$. Moist, alkaline soil. From farther west. [*P. AIROIDES* (Nuttall) S. Watson & Coulter]

Puccinellia tenella (Lange) Holmberg subsp. *alaskana* (Scribner & Merrill) Tzvelev—(Figure 73). $2n = 42, 56$. Salt marshes, gravelly beaches. [*P. paupercula* (Holmberg) Fernald & Weatherby var. *alaskana* (Scribner & Merrill) Fernald & Weatherby; *P. pumila* (Vasey) Hitchcock]

Schizachne

Schizachne purpurascens (Torrey) Swallen—False Melic (Figure 74). $2n = 20$. Rich woods.

Schizachyrium

Schizachyrium littorale (Nash) Bicknell—(Figure 74). $2n = 40$. Upper borders of sea beaches, dunes. [*Andropogon littoralis* Nash; *Andropogon scoparius* Michaux var. *littoralis* (Nash) Hitchcock; *S. scoparium* (Michaux) Nash var. *littorale* (Nash) Gould]

Schizachyrium scoparium (Michaux) Nash—Little Bluestem (Figure 74). $2n = 40$. Dry soil, old fields, open woods. [*Andropogon scoparius* Michaux var. *scoparius*; *Andropogon scoparius* var. *ducis* Fernald & Griscom; *Andropogon scoparius* var. *frequens* F. T. Hubbard; *Andropogon scoparius* var. *neomexicanus* (Nash) Hitchcock; *Andropogon scoparius* var. *septentrionalis* Fernald & Griscom]

Secale

SECALE CEREALE Linnaeus—Rye (Figure 74). $2n = 7, 14, 16, 27-29$. Waste places, roadsides. From Eurasia.

Setaria

SETARIA FABERI R. A. W. Herrmann—(Figure 75). $2n = 36$. Roadsides, railroads, waste places, fields. From eastern Asia.

SETARIA ITALICA (Linnaeus) P. Beauvois—Foxtail Millet (Figure 75). $2n = 18$. Cultivated land, waste places, roadsides. From the Old World.

Setaria parviflora (Poiret) Kerguélen—(Figure 75). $2n = 22, 36, 72$. Salt marsh borders, hillsides, waste places. [*S. geniculata*—misapplied]

SETARIA PUMILA (Poiret) Roemer & Schultes—Yellow Foxtail (Figure 75). $2n = 35, 36, 44, 72$. Dry sandy soil, roadsides, cultivated land, waste places. From Europe. [*S. GLAUCA*—misapplied; *S. LUTESCENS* (Weigel) F. T. Hubbard]

SETARIA VERTICILLATA (Linnaeus) P. Beauvois—Bur Foxtail (Figure 76). $2n = 18, 36, 54, 72, 108$. Waste places. From Eurasia.

SETARIA VIRIDIS (Linnaeus) P. Beauvois—Green Foxtail (Figure 76). $2n = 18, 36$. Cultivated fields, roadsides, railroads, waste places. From Europe. [*S. VIRIDIS* var. *BREVISETA* (Döll) Hitchcock; *S. VIRIDIS* var. *WEINMANNII* (Roemer & Schultes) Brand]

Sorghastrum

Sorghastrum nutans (Linnaeus) Nash—Indian Grass (Figure 76). $2n = 20, 40, 80$. Dry fields, roadsides, rocky shores of rivers.

Sorghum

SORGHUM BICOLOR (Linnaeus) Moench—Sorghum (Figure 76). $2n = 10, 20$. Waste places. From Africa. [*S. VULGARE* Persoon]

SORGHUM HALEPENSE (Linnaeus) Persoon—Johnson Grass (Figure 77). $2n = 18, 20, 26, 40, 60$. Waste places. From the Mediterranean.

Spartina

Spartina alterniflora Loiseleur—Smooth Cordgrass (Figure 77). $2n = 40, 42, 56, 60, 62, 70$. Salt marshes, tidal shores. [*S. alterniflora* var. *pilosa* (Merrill) Fernald]

Spartina cynosuroides (Linnaeus) Roth—Big Cordgrass (Figure 77). $2n = 28, 40, 42, \text{ca. } 80$. Salt marshes. [*S. cynosuroides* var. *polystachya* (Michaux) Beal ex Fernald]

Spartina patens (Aiton) Muhlenberg—Saltmeadow Cordgrass (Figure 77). $2n = 28, 40, 42, 56$. Salt marshes. [*S. patens* var. *monogyna* (M. A. Curtis) Fernald]

Spartina pectinata Link—Prairie Cordgrass (Figure 78). $2n = 28, 40, 42, 84$. Shores, meadows, lowlands. [*S. pectinata* var. *suttiei* (Farwell) Fernald]

—*Spartina* hybrids—

Spartina × *caespitosa* A. A. Eaton—(Figure 78). $2n = 40$. Salt marsh borders, beaches. [*S. patens* (Aiton) Muhlenberg × *S. pectinata* Link; *S. patens* var. *caespitosa* (A. A. Eaton) Hitchcock]

Sphenopholis

Sphenopholis intermedia Rydberg—(Figure 78). $2n = 14$. Meadows, shores, damp slopes. [*S. obtusata* (Michaux) Scribner var. *major* (Torrey) K. S. Erdman]

Sphenopholis nitida (Biehler) Scribner—(Figure 78). $2n = 14$. Rich, rocky woods.

Sphenopholis obtusata (Michaux) Scribner—Prairie Wedgegrass (Figure 79). $2n = 14$. Wood borders, shores, dry ledges. [*S.*

obtusata var. *lobata* (Trinius) Scribner; *S. obtusata* var. *pubescens* (Scribner & Merrill) Scribner]

Sphenopholis pensylvanica (Linnaeus) Hitchcock—Swamp Oats (Figure 79). $2n = 14$. Meadows. [*Trisetum pensylvanicum* (Linnaeus) P. Beauvois ex Roemer & Schultes]

Sporobolus

Sporobolus asper (P. Beauvois) Kunth—(Figure 79). $2n = 54, 88, 108$. Dry, sandy, open soil.

Sporobolus clandestinus (Biehler) Hitchcock—(Figure 79). $2n = 46, 48, 52, 54, 56$. Dry, sandy or rocky soil.

SPOROBOLUS CONTRACTUS Hitchcock—Spike Dropseed (Figure 80). $2n = 36$. Sandy soil. [*S. CRYPTANDRUS* (Torrey) A. Gray var. *STRICTUS* Scribner]

Sporobolus cryptandrus (Torrey) A. Gray—Sand Dropseed (Figure 80). $2n = 18, 36, 38, 72$. Sandy soil, usually near seashores.

Sporobolus heterolepis A. Gray—Prairie Dropseed (Figure 80). $2n = 72$. Dry trap (limestone or serpentine).

Sporobolus neglectus Nash—(Figure 80). $2n = 36$. Dry open soil.

Sporobolus vaginiflorus (Torrey ex A. Gray) Wood—Poverty Grass (Figure 81). $2n = 54$. Roadsides, sandy fields, dry, open, sterile soil. [*S. vaginiflorus* var. *inaequalis* Fernald]

Taeniatherum

TAENIATHERUM CAPUT-MEDUSAE (Linnaeus) Nevski—(Figure 81). $2n = 14$. Waste places. From Europe. *ELYMUS CAPUT-MEDUSAE* Linnaeus]

Torreyochloa

Torreyochloa pallida (Torrey) Church var. *pallida*—(Figure 81).
 $2n = 14$. Pools, pond margins. [*Glyceria pallida* (Torrey)
 Trinius; *Puccinellia pallida* (Torrey) R. T. Clausen]

Torreyochloa pallida (Torrey) Church var. *fernaldii* (Hitchcock)
 Dore ex Koyama & Kawano—(Figure 81). $2n = 14$. Shallow
 water, wet places. [*Glyceria fernaldii* (Hitchcock) St. John;
Glyceria pallida (Torrey) Trinius var. *fernaldii* Hitchcock]

Tragus

TRAGUS BERTERONIANUS Schultes—(Figure 82). $2n = 20$.
 Ballast, wool waste. From the Old World.

TRAGUS RACEMOSUS (Linnaeus) Allioni—(Figure 82). $2n =$
 40. Ballast, waste areas. From the Old World.

Tridens

Tridens flavus (Linnaeus) Hitchcock—Purpletop (Figure 82). $2n$
 = 40. Dry fields, roadsides. [*Triodia flava* (Linnaeus) Smyth]

Triplasis

Triplasis purpurea (Walter) Chapman—Purple Sandgrass (Figure
 82). $2n = 40$. Sand dunes.

Tripsacum

Tripsacum dactyloides (Linnaeus) Linnaeus—Eastern Gamagrass
 (Figure 83). $2n = 18, 36, 45, 54, 72, 90, 108$. Shores, salt
 marsh borders.

Trisetum

TRISETUM FLAVESCENS (Linnaeus) P. Beauvois—Yellow Oats
 (Figure 83). $2n = 24, 28, 36, 38, 40, 42$. Fields, roadsides.
 From Europe.

Trisetum melicoides (Michaux) Vasey ex Scribner—Purple False

Oats (Figure 83). Gravelly shores, river thickets. [*T. melicoides* var. *majus* (A. Gray) Hitchcock]

Trisetum spicatum (Linnaeus) Richter—(Figure 83). $2n = 14, 28, 42$. Wet ledges, shores. [*T. spicatum* var. *molle* (Michaux) Beal; *T. spicatum* var. *pilosiglume* Fernald]

Triticum

TRITICUM AESTIVUM Linnaeus—Wheat (Figure 84). $2n = 14, 21, 34, 41, 42, 44$. Waste places. From Eurasia.

Urochloa

UROCHLOA TEXANA (Buckley) R. D. Webster—Texas Millet (Figure 84). $2n = 36, 54$. Fields, waste places. From farther west [*PANICUM TEXANUM* Buckley]

Vahlodea

Vahlodea atropurpurea (Wahlenberg) Fries ex Hartman—Mountain Hairgrass (Figure 84). $2n = 14$. High altitudes. [*Deschampsia atropurpurea* (Wahlenberg) Scheele]

Vulpia

VULPIA BROMOIDES (Linnaeus) S. F. Gray—(Figure 84). $2n = 14$. Waste places. From Europe. [*FESTUCA DERTONENSIS* (Allioni) Ascherson & Graebner; *V. DERTONENSIS* (Allioni) Gola]

VULPIA MYUROS (Linnaeus) K. C. Gmelin—Rat-tail Fescue (Figure 85). $2n = 14, 28, 42$. Dry fields, waste places. From Europe. [*FESTUCA MEGALURA* Nuttall; *FESTUCA MYUROS* Linnaeus]

Vulpia octoflora (Walter) Rydberg var. *octoflora*—Six-weeks Fescue (Figure 85). $2n = 14$. Marsh borders, sandy waste ground.

Vulpia octoflora (Walter) Rydberg var. *glauca* (Nuttall) Fernald—

(Figure 85). $2n = 14$. Dry ledges, sandy soil. [*V. octoflora* var. *tenella* (Willdenow) Fernald; *Festuca octoflora* Walter var. *glauca* (Nuttall) Fernald; *Festuca octoflora* var. *tenella* (Willdenow) Fernald]

Zea

ZEA MAYS Linnaeus—Corn (Figure 85). $2n = 20, 21, 22$. Waste places, roadsides, margins of cultivated fields. From Mexico.

Zizania

Zizania aquatica Linnaeus—Annual Wild Rice (Figure 86). $2n = 30$. Mud flats along rivers, often tidal.

Zizania palustris Linnaeus—(Figure 86). Shallow, quiet waters. [*Z. aquatica* Linnaeus var. *angustifolia* Hitchcock]

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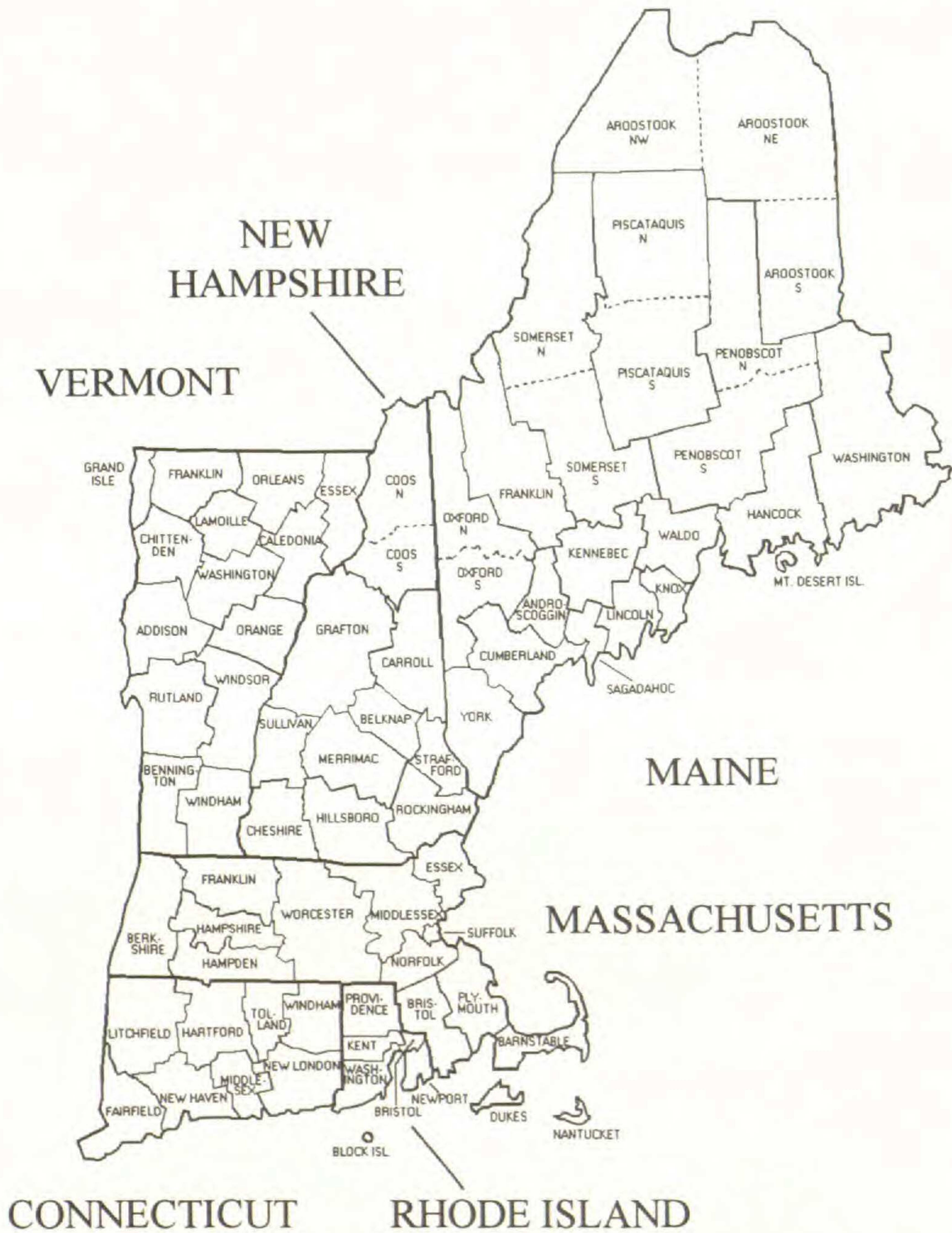


Figure 1. Key map for counties of the New England states (and Mt. Desert Island, Maine; Block Island, Rhode Island; arbitrary divisions of larger Maine counties and of Coös County, New Hampshire).



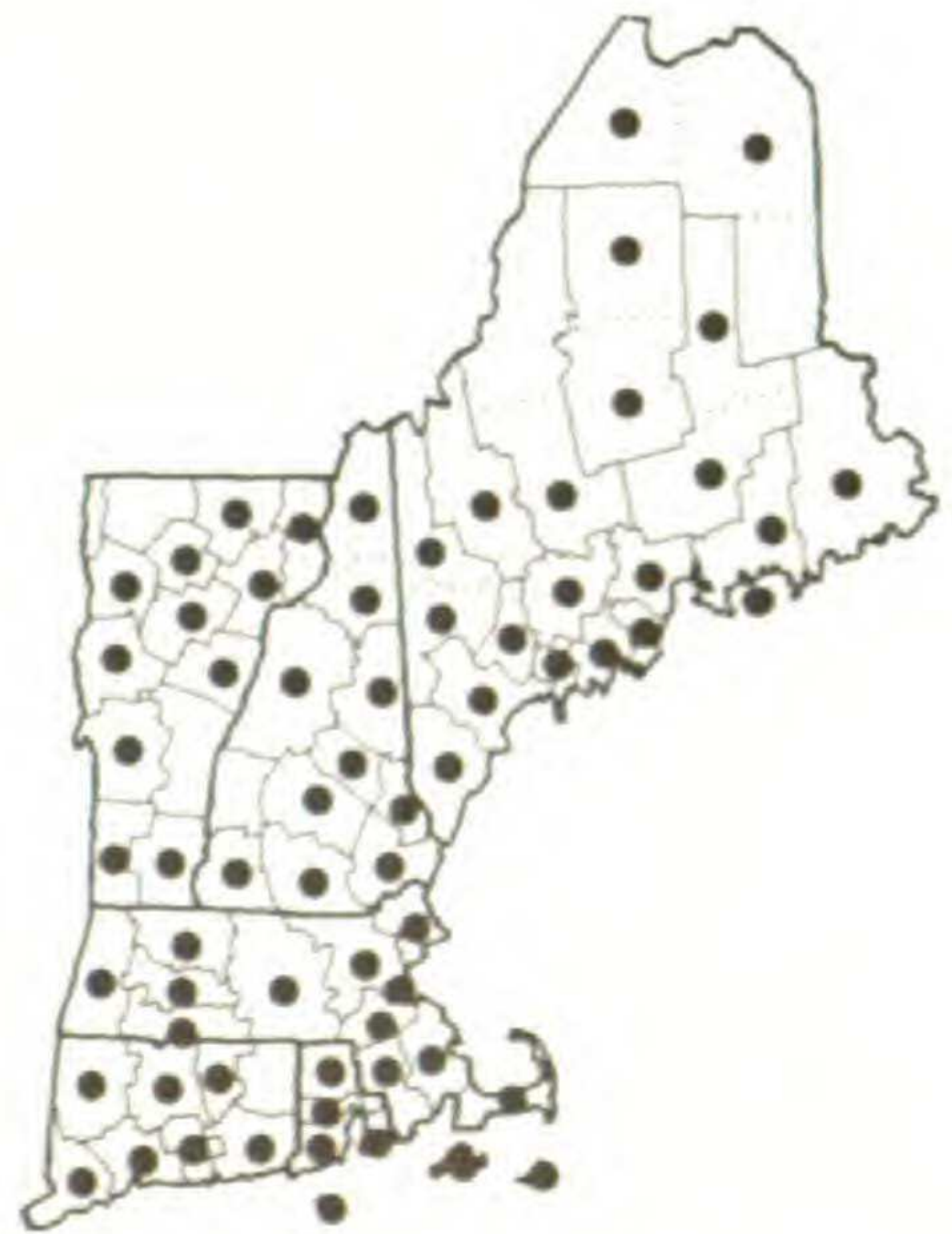
AGROPYRON CRISTATUM



AGROPYRON DESERTORUM



AGROSTIS CANINA



AGROSTIS CAPILLARIS

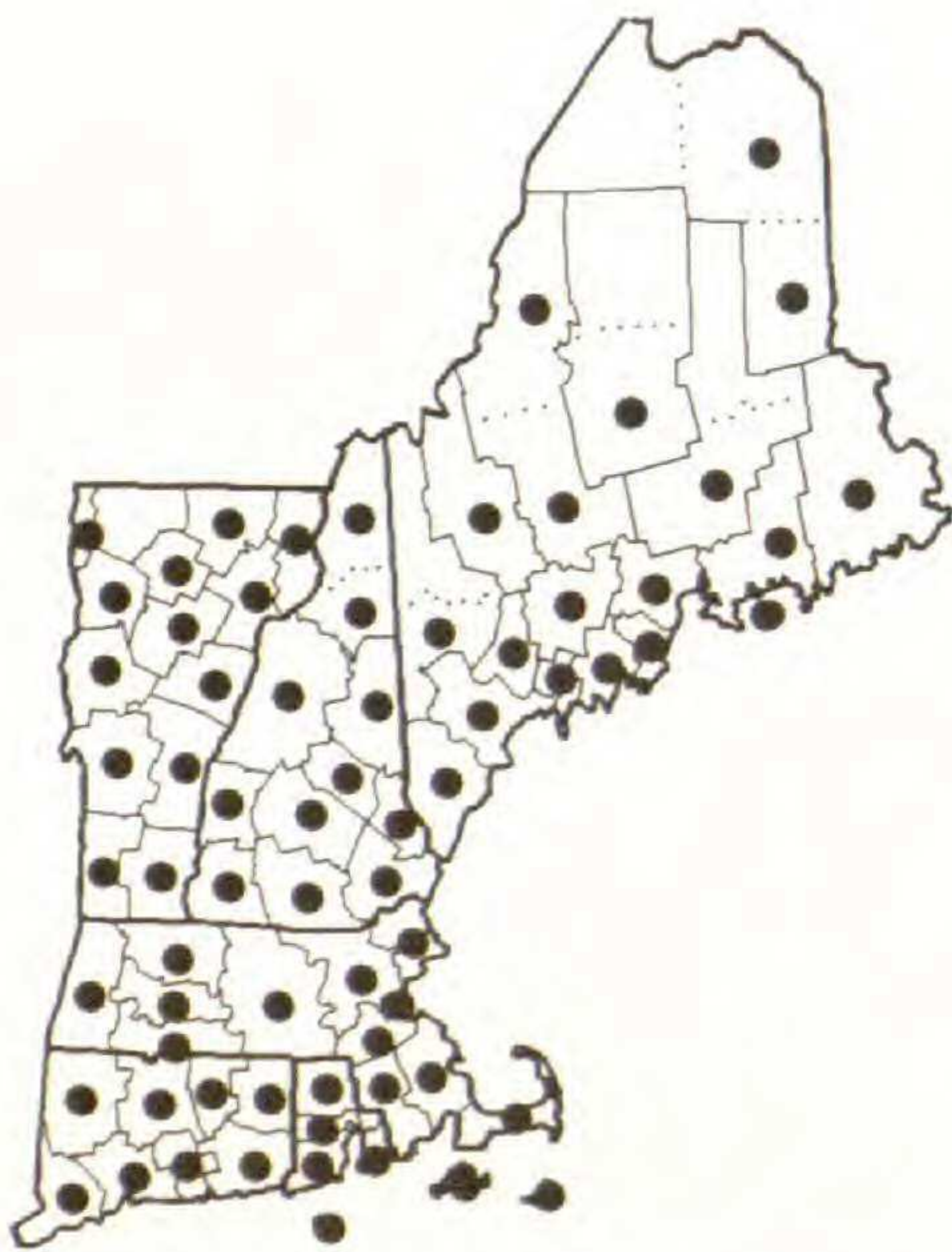
Figure 2. Distribution maps for *AGROPYRON CRISTATUM*, *A. DESERTORUM*, *AGROSTIS CANINA* and *A. CAPILLARIS*.



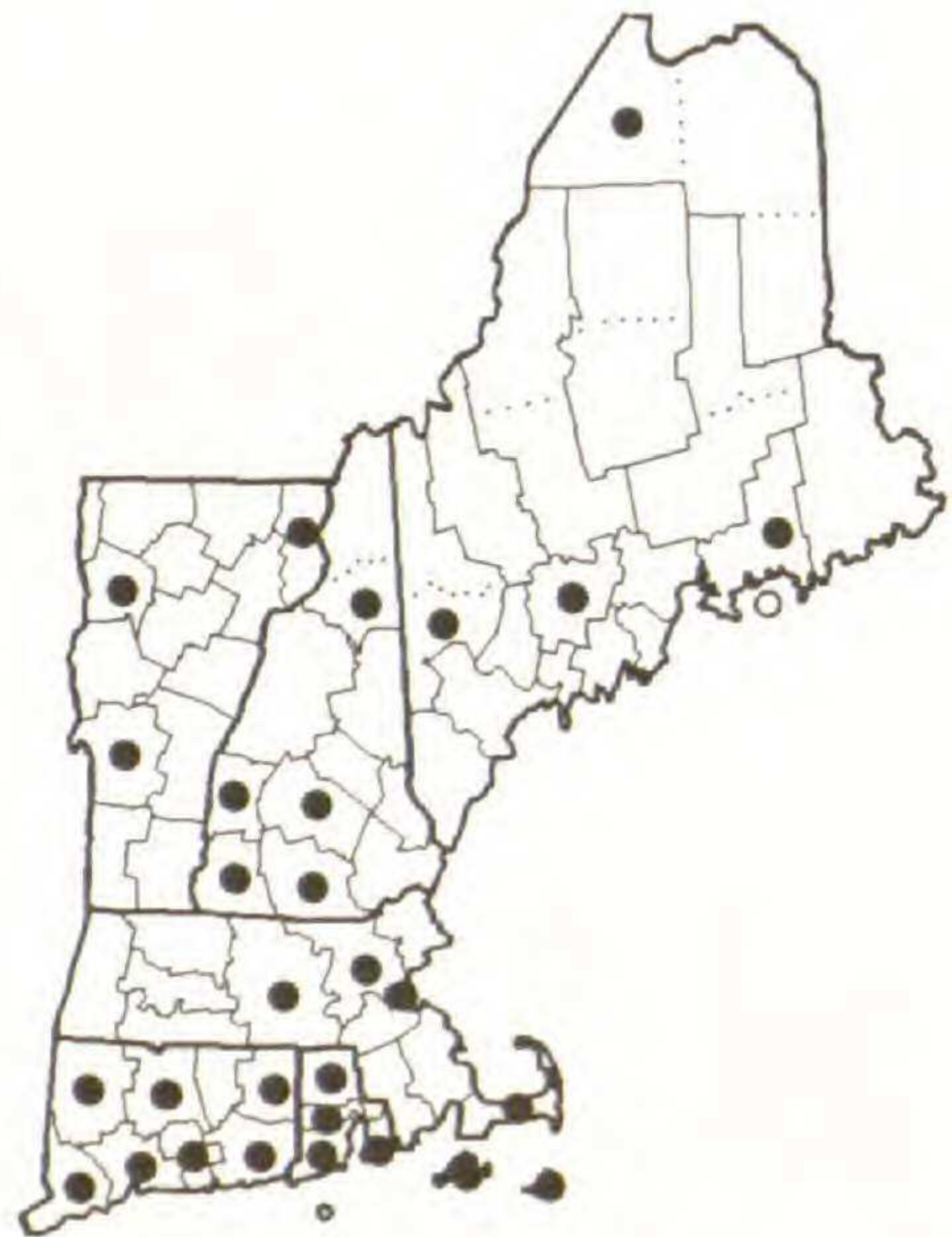
AGROSTIS ELLIOTTIANA



AGROSTIS EXARATA



AGROSTIS GIGANTEA

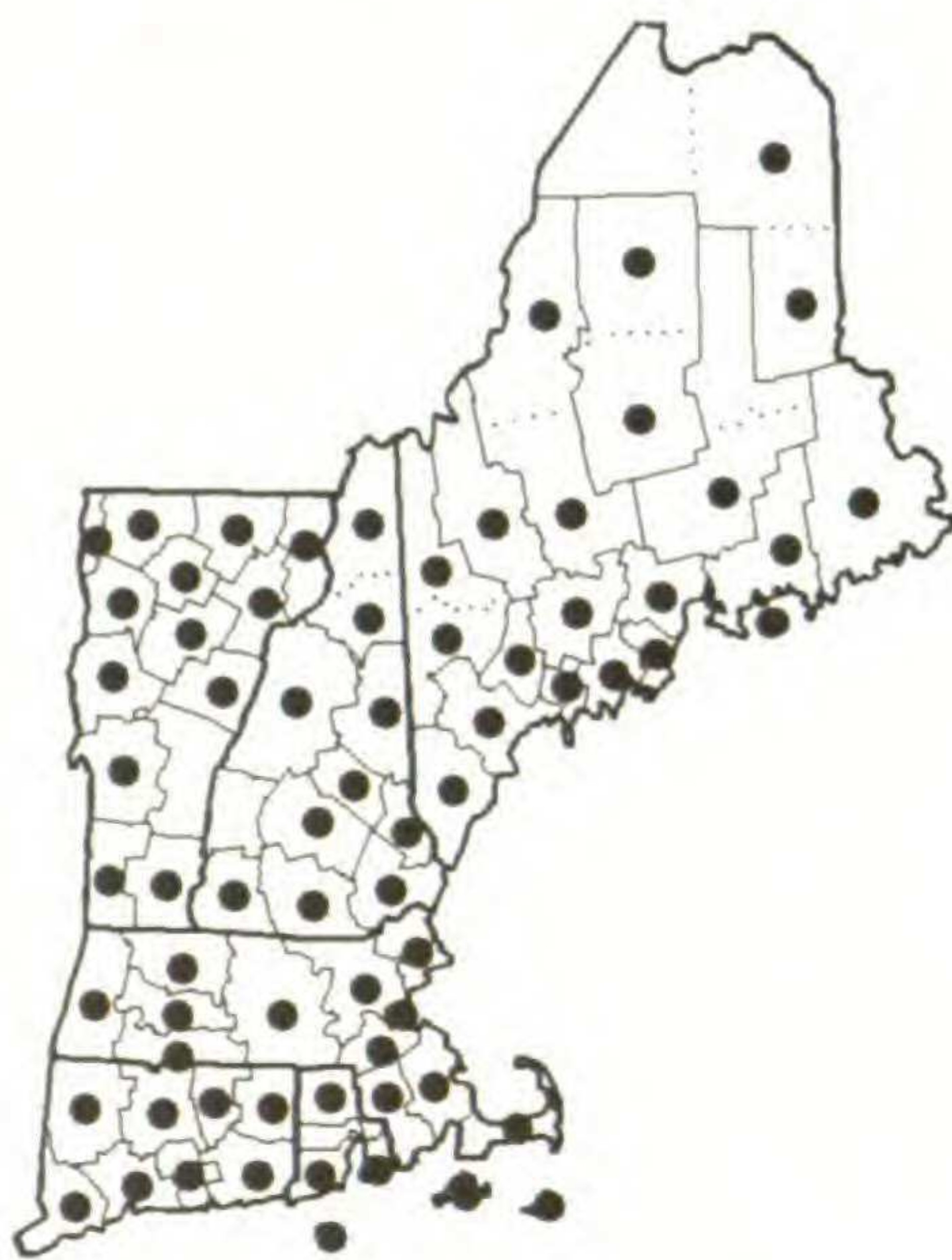


Agrostis hyemalis

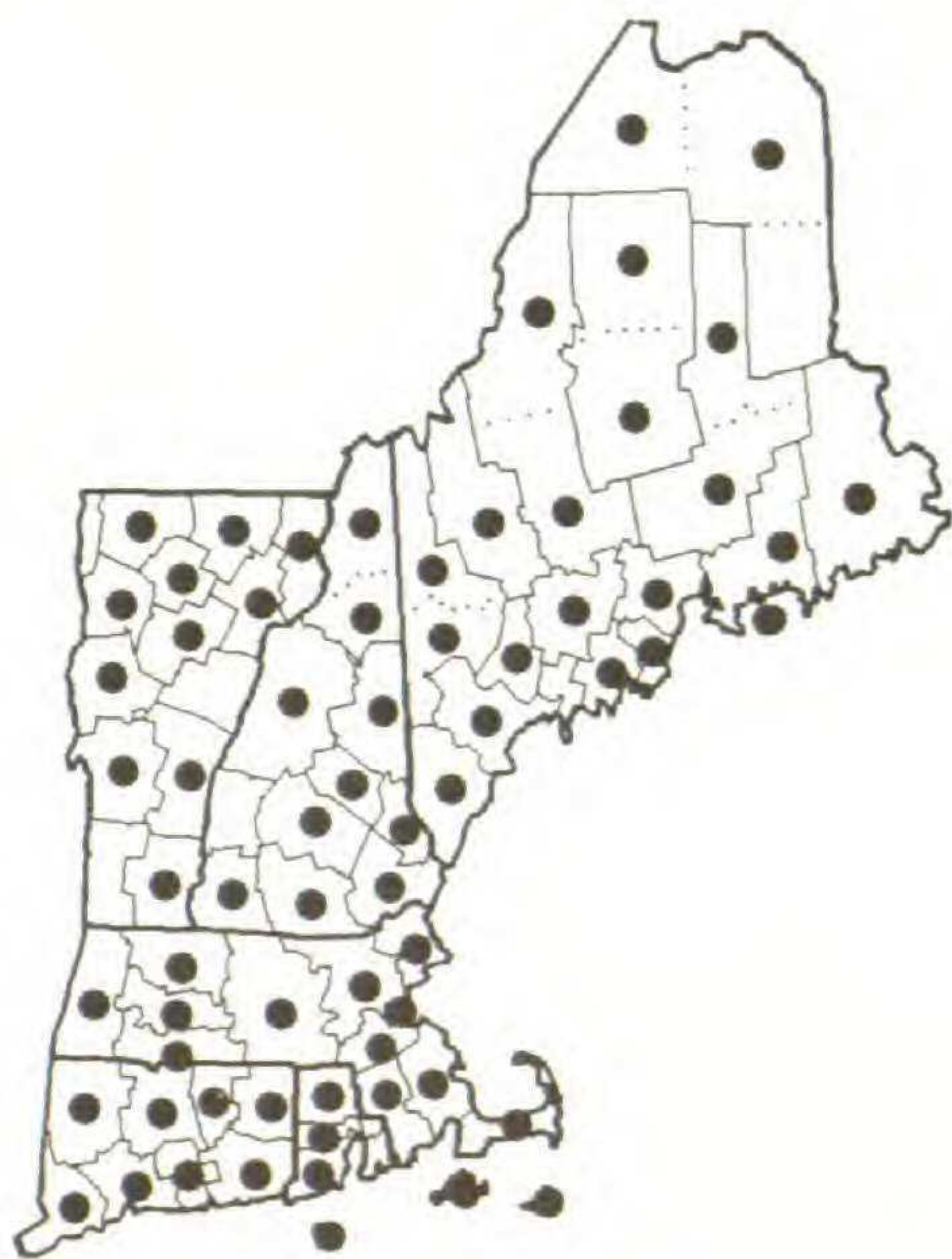
Figure 3. Distribution maps for *AGROSTIS ELLIOTTIANA*, *A. EXARATA*, *A. GIGANTEA* and *A. hyemalis*.



Agrostis mertensii



Agrostis perennans



Agrostis scabra



AGROSTIS STOLONIFERA

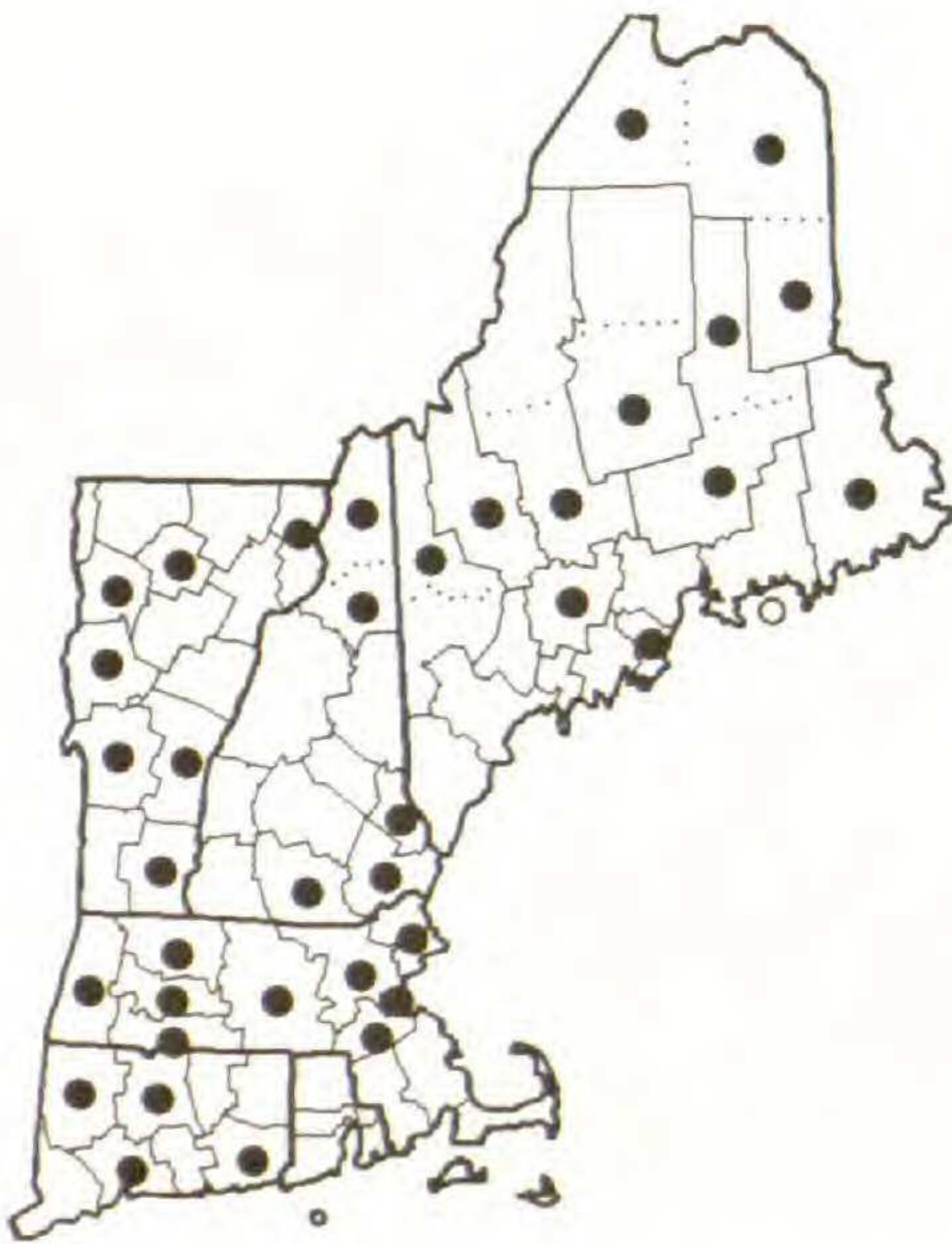
Figure 4. Distribution maps for *Agrostis mertensii*, *A. perennans*, *A. scabra* and *A. STOLONIFERA*.



AIRA CARYOPHYLLEA
var. *CARYOPHYLLEA*



AIRA PRAECOX

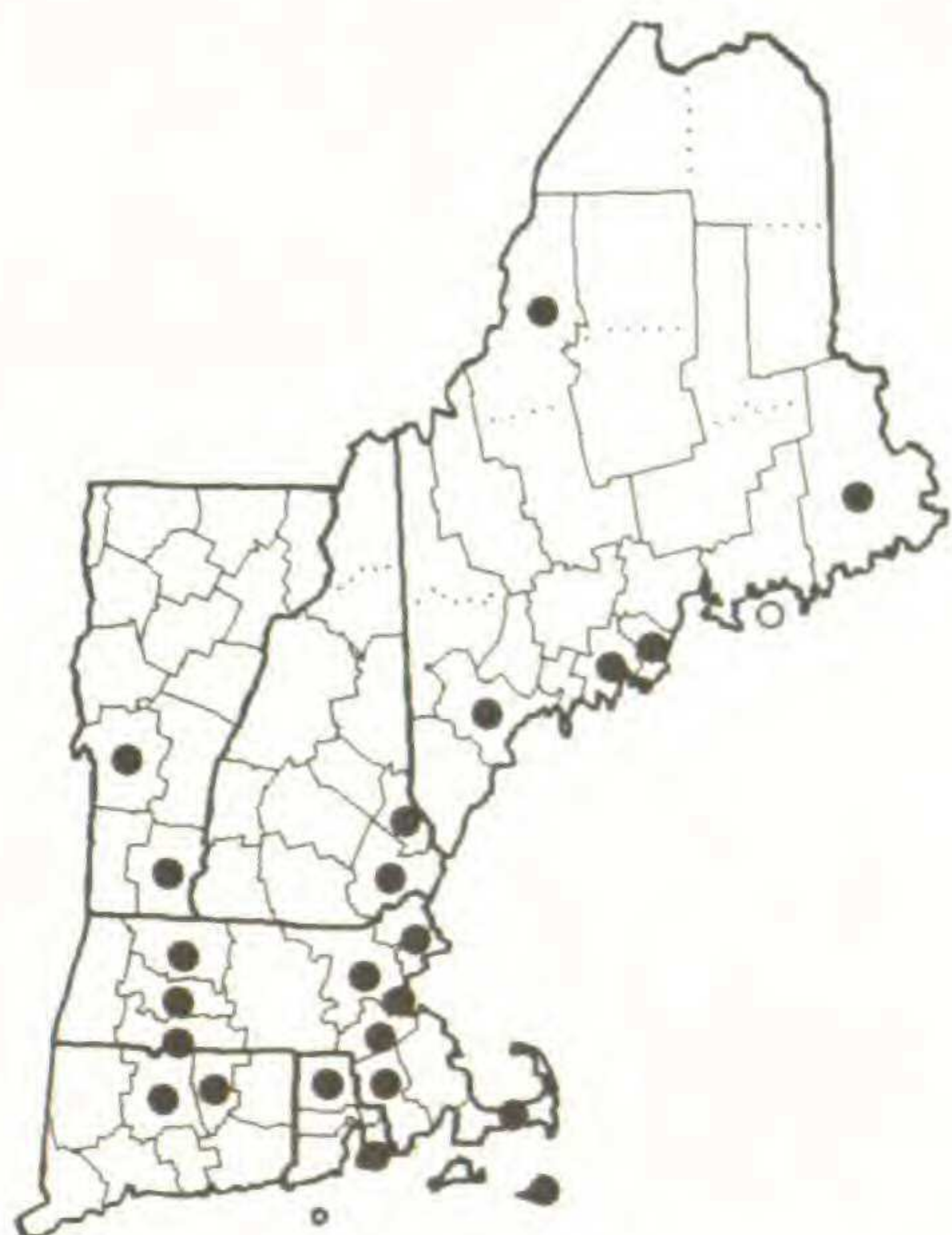


Alopecurus aequalis



ALOPECURUS CAROLINIANUS

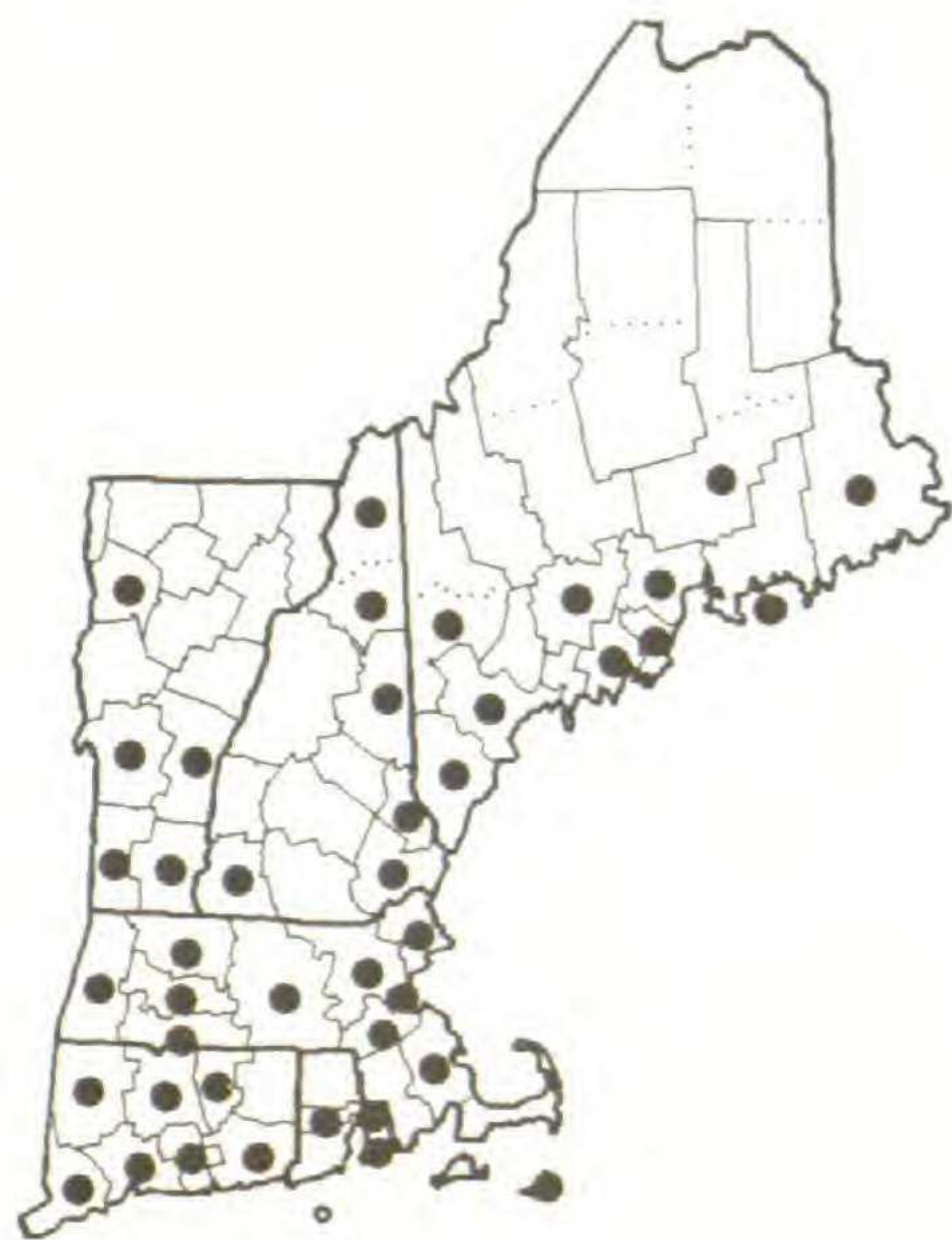
Figure 5. Distribution maps for *AIRA CARYOPHYLLEA* var. *CARYOPHYLLEA*, *A. PRAECOX*, *Alopecurus aequalis* and *A. CAROLINIANUS*.



ALOPECURUS GENICULATUS



ALOPECURUS MYOSUROIDES



ALOPECURUS PRATENSIS



Ammophila breviligulata

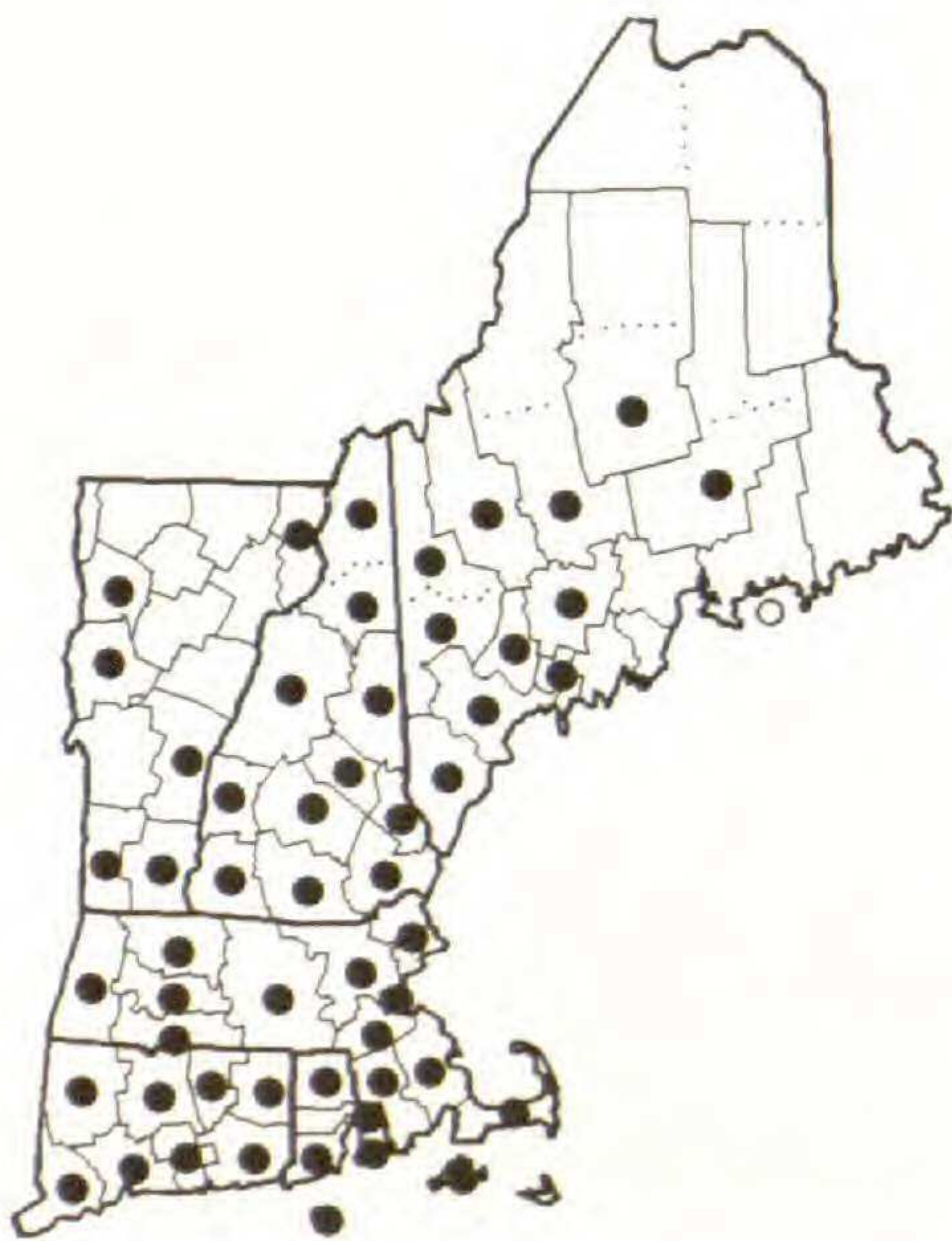
Figure 6. Distribution maps for *ALOPECURUS GENICULATUS*, *A. MYOSUROIDES*, *A. PRATENSIS* and *Ammophila breviligulata*.



Ammophila champlainensis



AMPHICARPUM PURSHII



Andropogon gerardii



Andropogon glomeratus

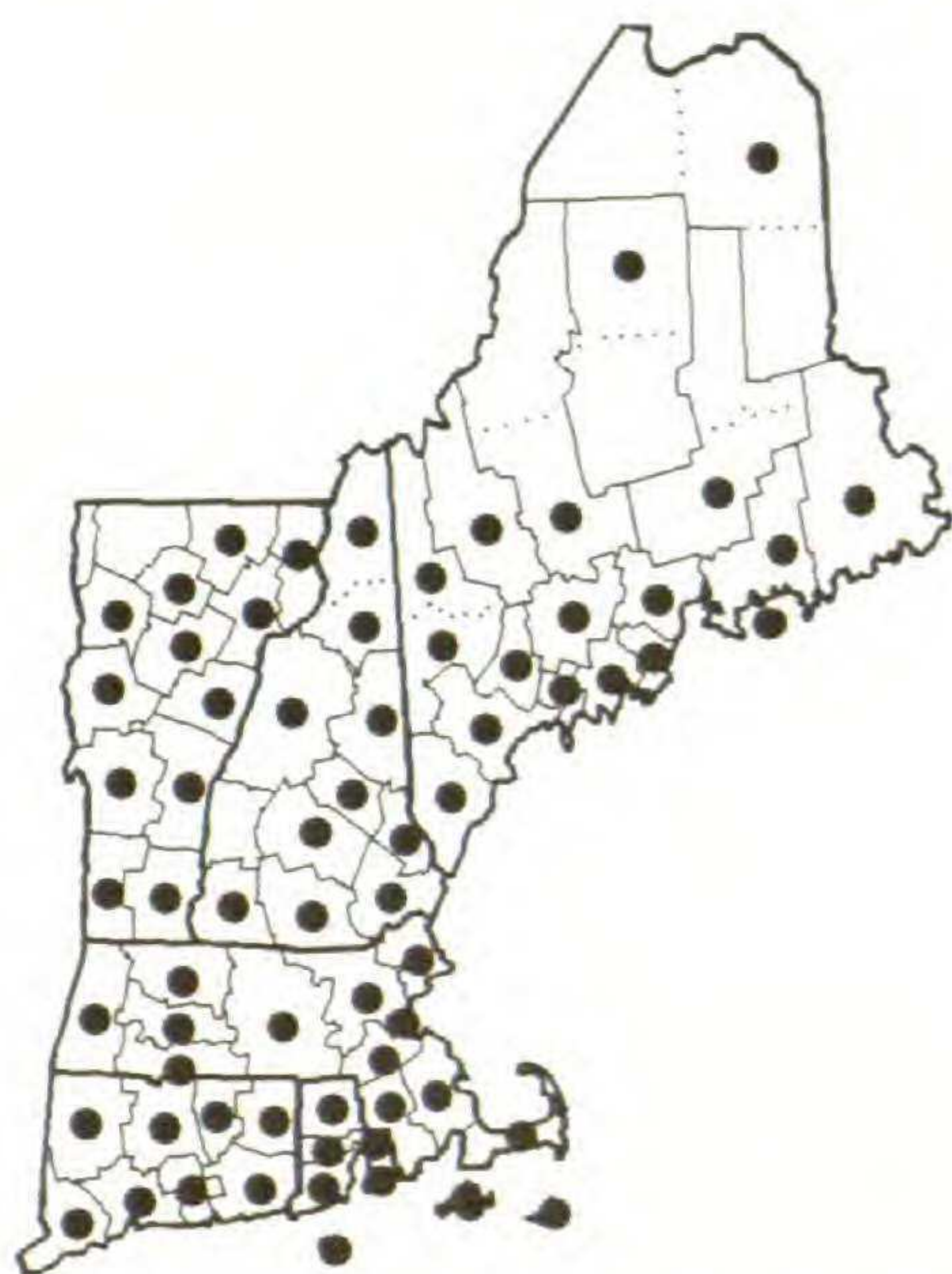
Figure 7. Distribution maps for *Ammophila champlainensis*, AMPHICARPUM PURSHII, *Andropogon gerardii* and *A. glomeratus*.



Andropogon virginicus



ANTHOXANTHUM ARISTATUM



ANTHOXANTHUM ODORATUM



APERA SPICA-VENTI

Figure 8. Distribution maps for *Andropogon virginicus*, *ANTHOXANTHUM ARISTATUM*, *A. ODORATUM* and *APERA SPICA-VENTI*.

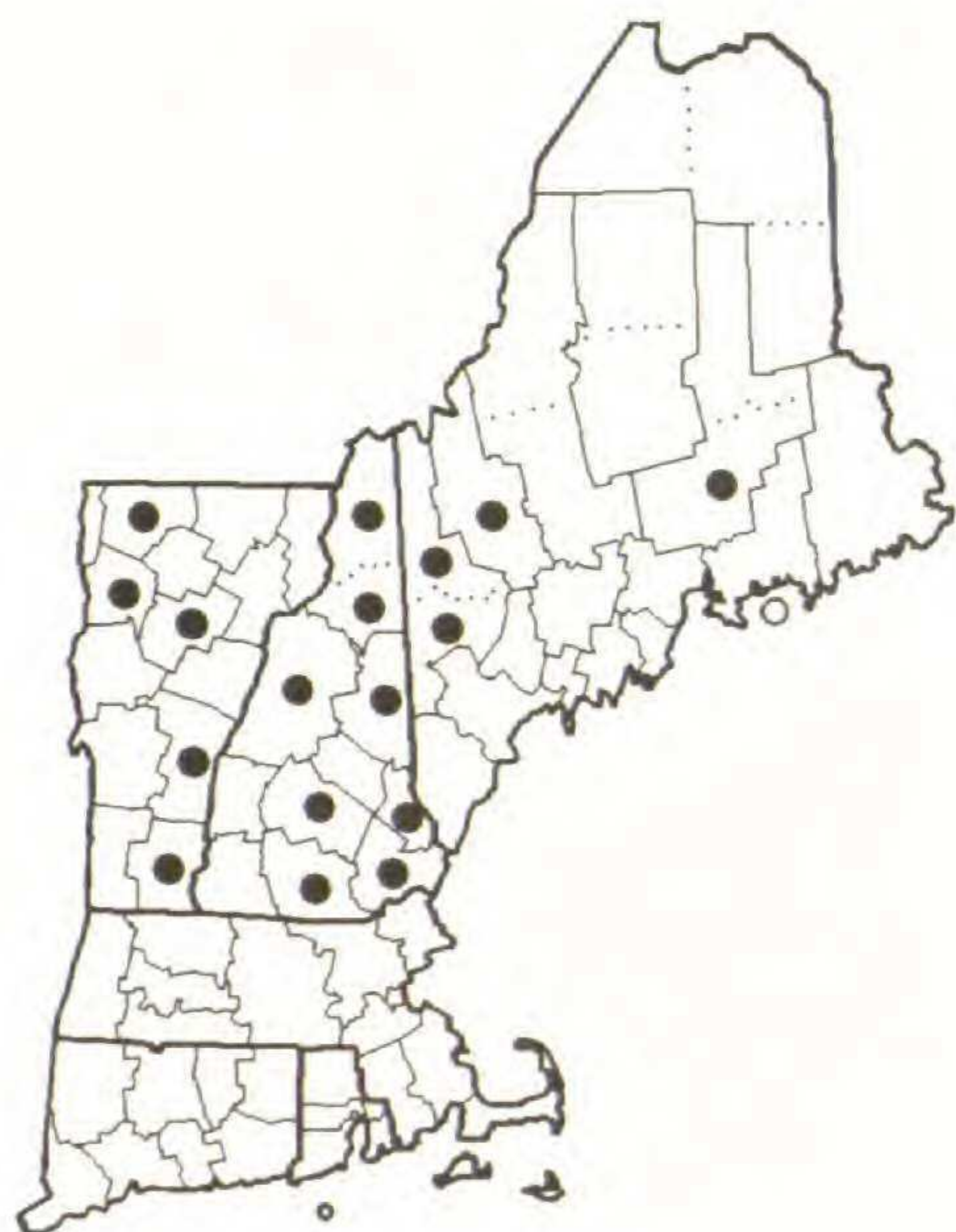
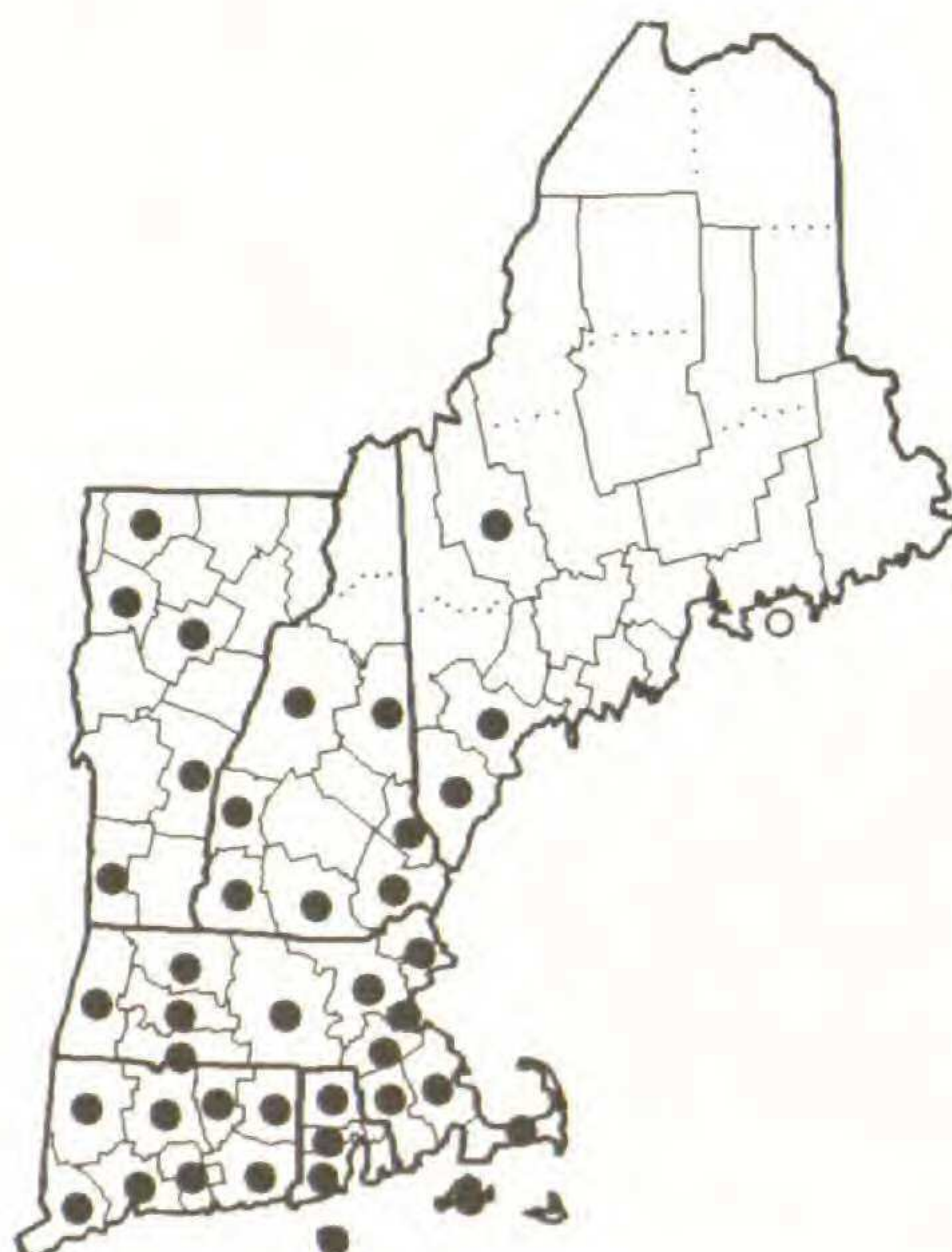
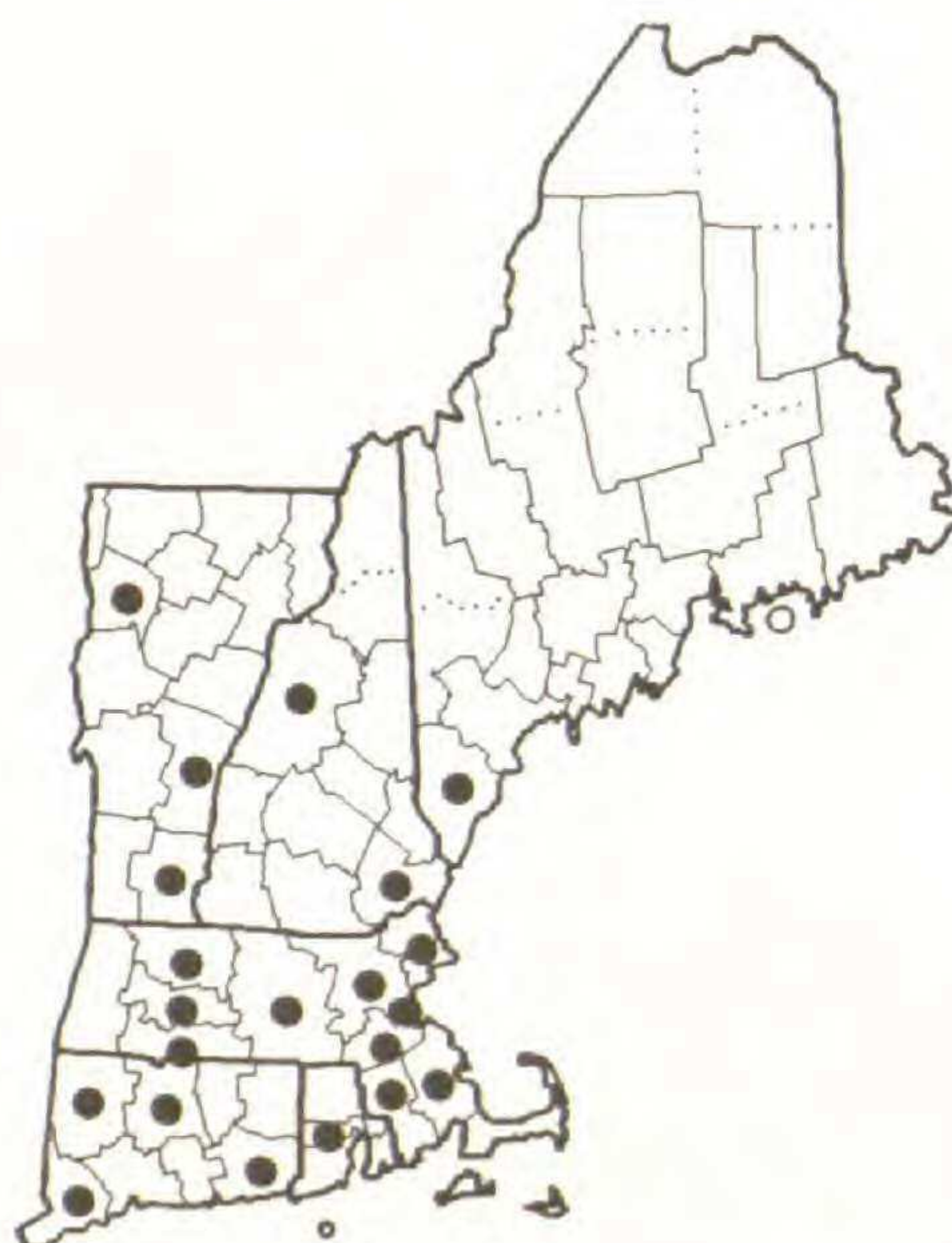
*Aristida basiramea**Aristida dichotoma**Aristida longespica*
var. *geniculata**Aristida oligantha*

Figure 9. Distribution maps for *Aristida basiramea*, *A. dichotoma*, *A. longespica* var. *geniculata* and *A. oligantha*.



Aristida purpurascens



ARISTIDA PURPUREA
var. *NEALLEYI*



Aristida tuberculosa



ARRHENATHERUM ELATIUS
subsp. *ELATIUS*

Figure 10. Distribution maps for *Aristida purpurascens*, *A. PURPUREA* var. *NEALLEYI*, *A. tuberculosa* and *ARRHENATHERUM ELATIUS* subsp. *ELATIUS*.



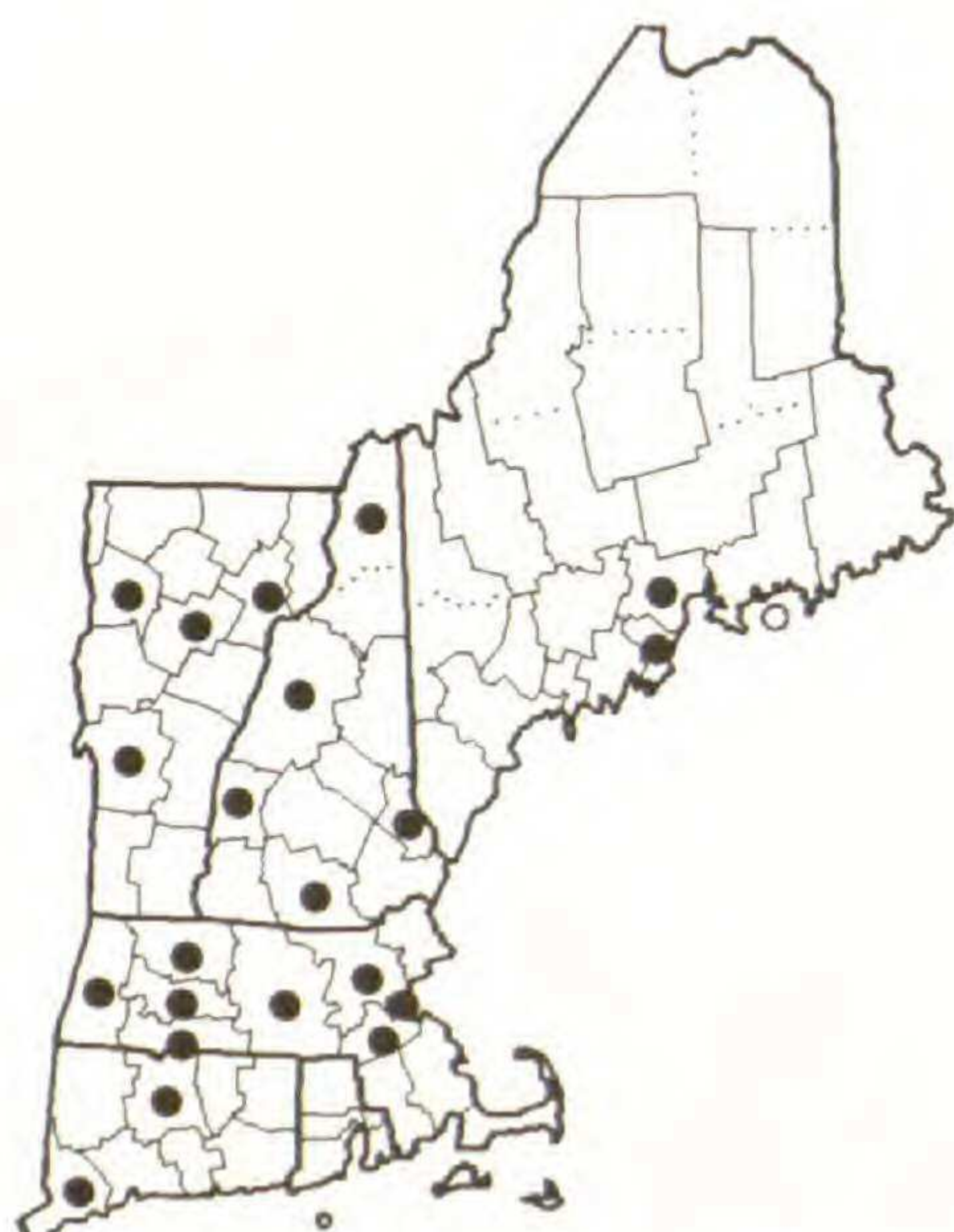
ARRHENATHERUM ELATIUS
subsp. *BULBOSUM*



ARTHRAOXON HISPIDUS

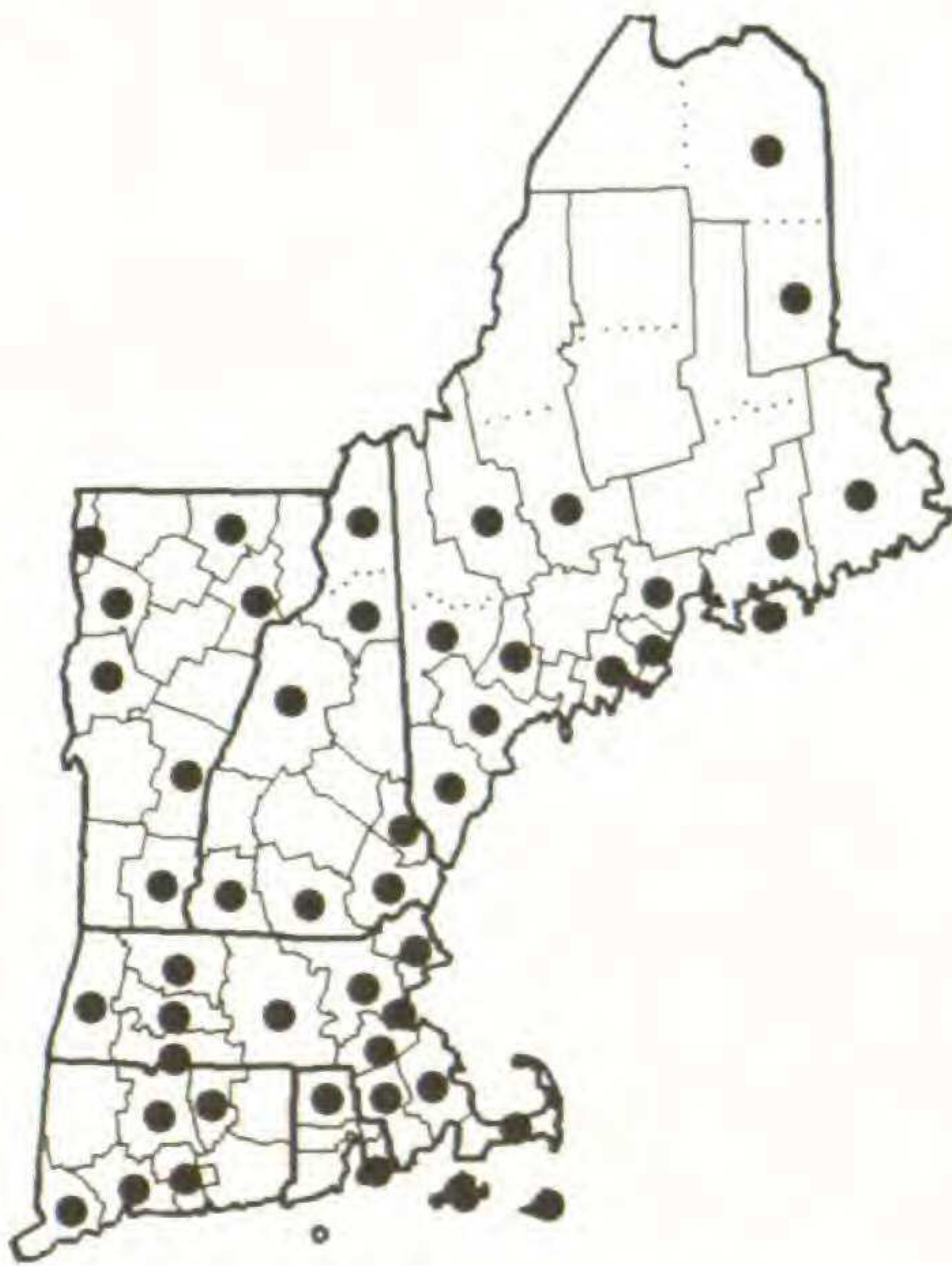


ARUNDINARIA JAPONICA



AVENA FATUA

Figure 11. Distribution maps for *ARRHENATHERUM ELATIUS* subsp. *BULBOSUM*, *ARTHRAOXON HISPIDUS*, *ARUNDINARIA JAPONICA* and *AVENA FATUA*.



AVENA SATIVA



AVENA STRIGOSA



AVENULA PUBESCENS



Bouteloua curtipendula

Figure 12. Distribution maps for *AVENA SATIVA*, *A. STRIGOSA*, *AVENULA PUBESCENS* and *Bouteloua curtipendula*.



BOUTELOUA GRACILIS



BOUTELOUA HIRSUTA



BOUTELOUA REPENS



BOUTELOUA RIGIDISETA

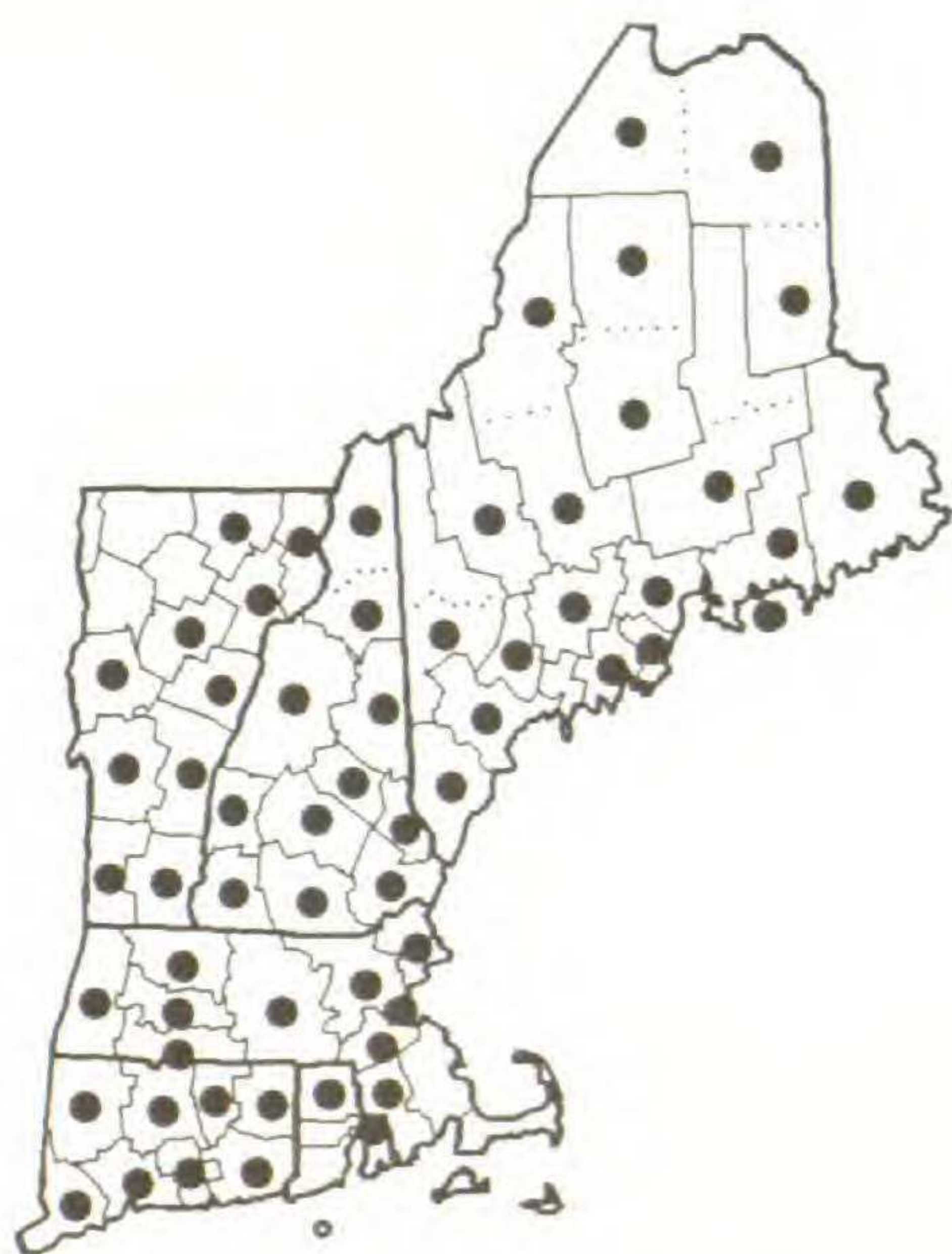
Figure 13. Distribution maps for *BOUTELOUA GRACILIS*, *B. HIRSUTA*, *B. REPENS* and *B. RIGIDISETA*.



BOUTELOUA SIMPLEX



Brachyelytrum erectum
var. *erectum*

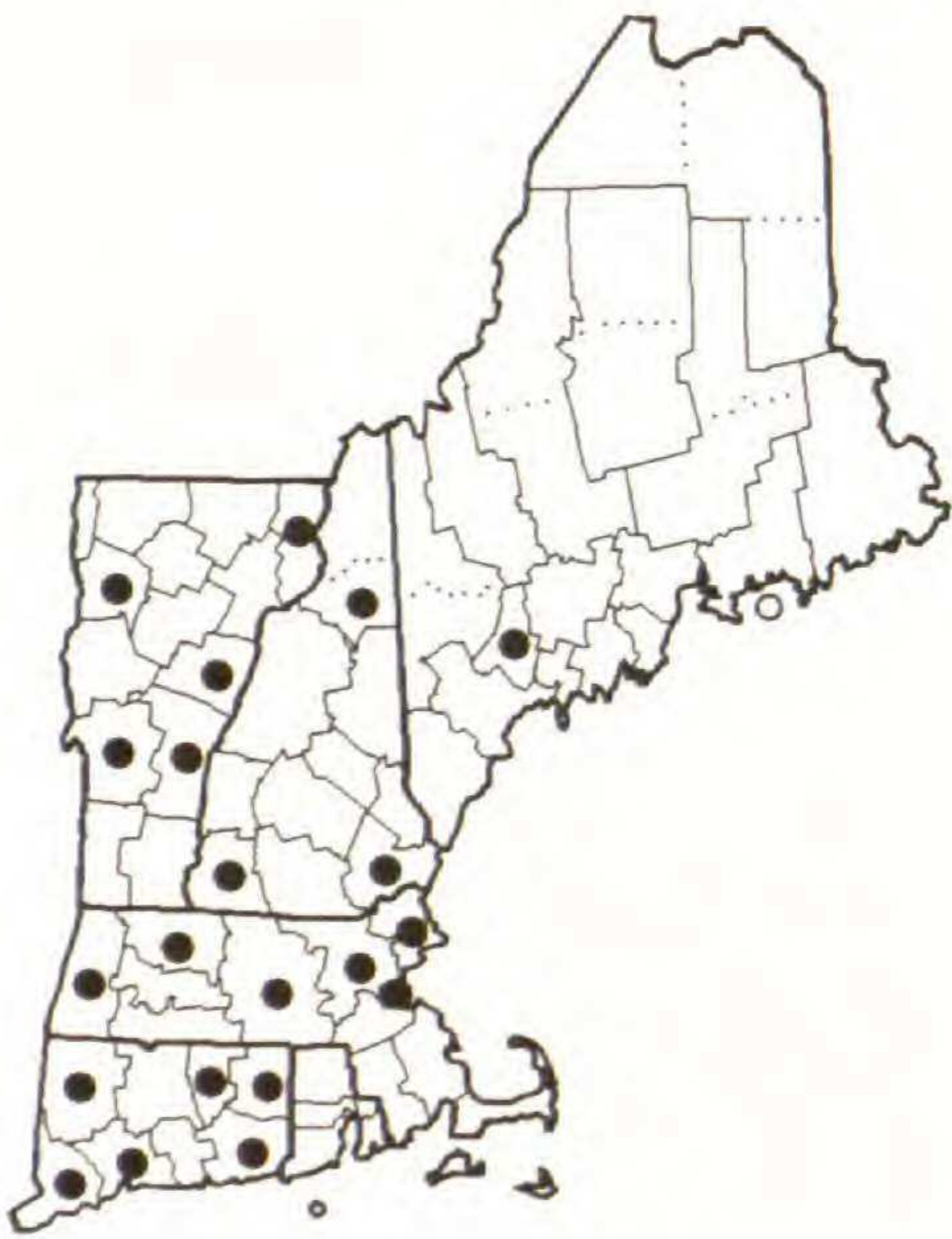


Brachyelytrum erectum
var. *glabratum*



BRACHYPODIUM PINNATUM

Figure 14. Distribution maps for *BOUTELOUA SIMPLEX*, *Brachyelytrum erectum* var. *erectum*, *B. erectum* var. *glabratum* and *BRACHYPODIUM PINNATUM*.



BRIZA MEDIA



BRIZA MINOR

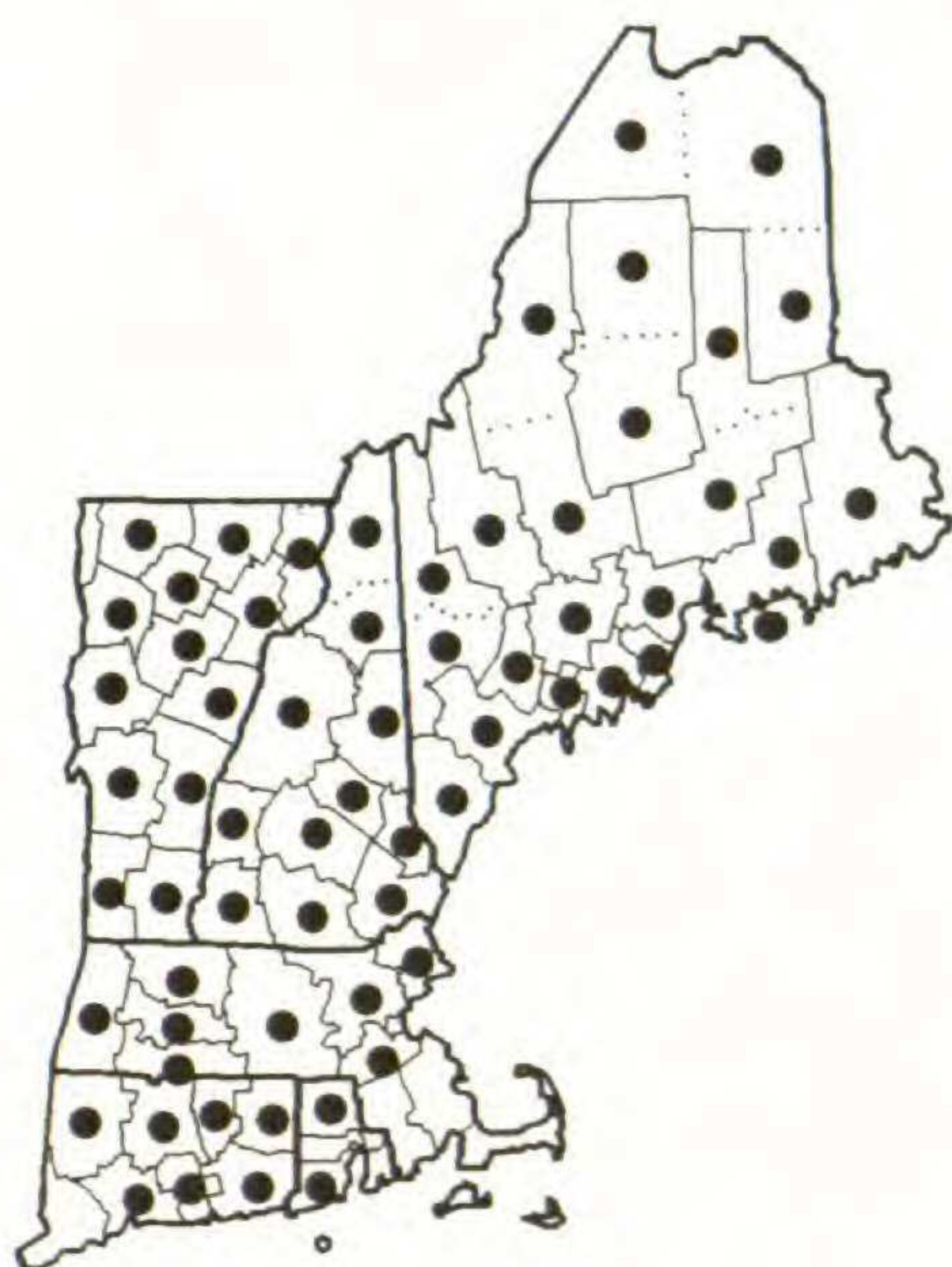


BROMUS ARVENSIS

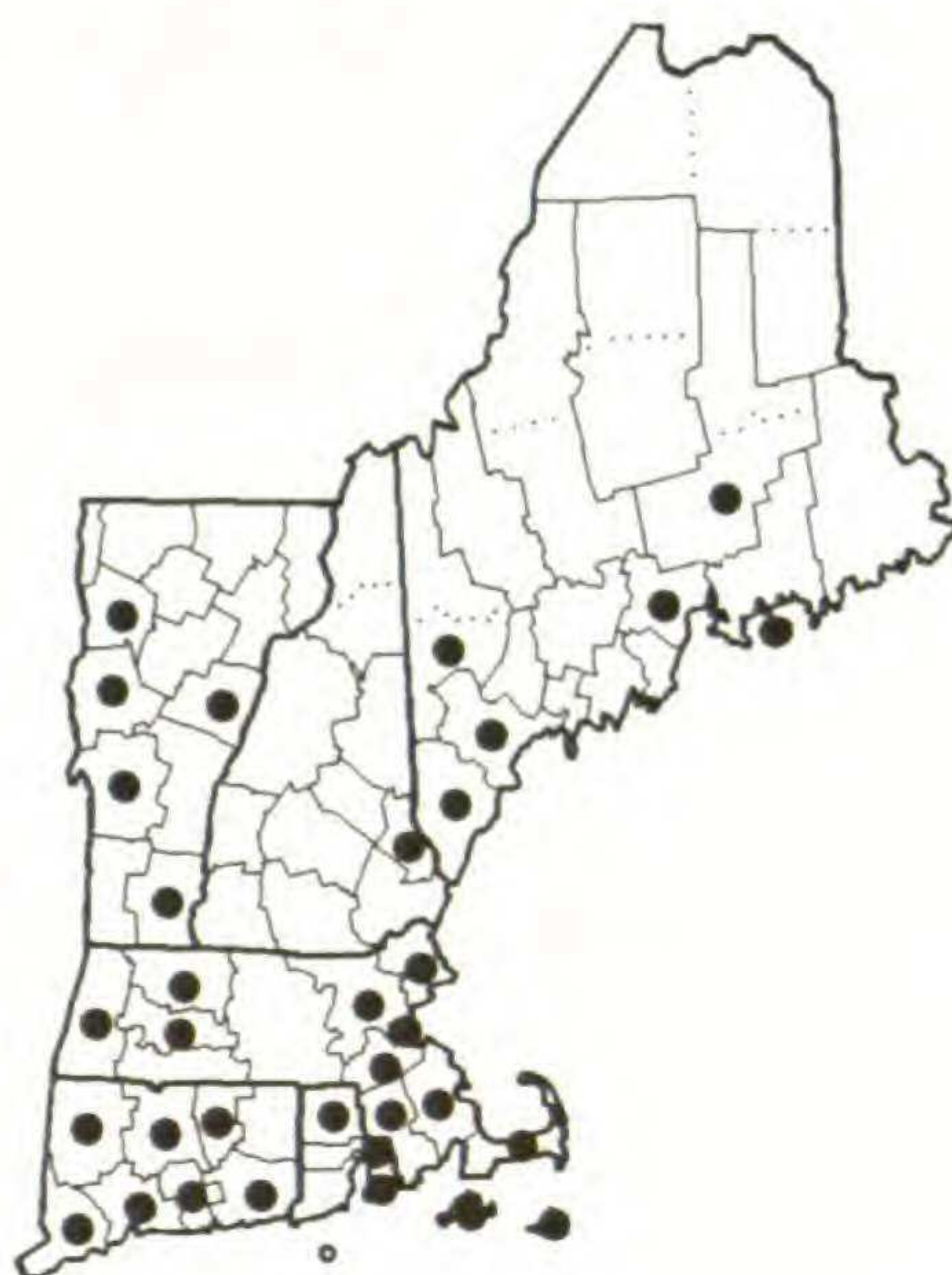


BROMUS BRIZIFORMIS

Figure 15. Distribution maps for *BRIZA MEDIA*, *B. MINOR*, *BROMUS ARVENSIS* and *B. BRIZIFORMIS*.



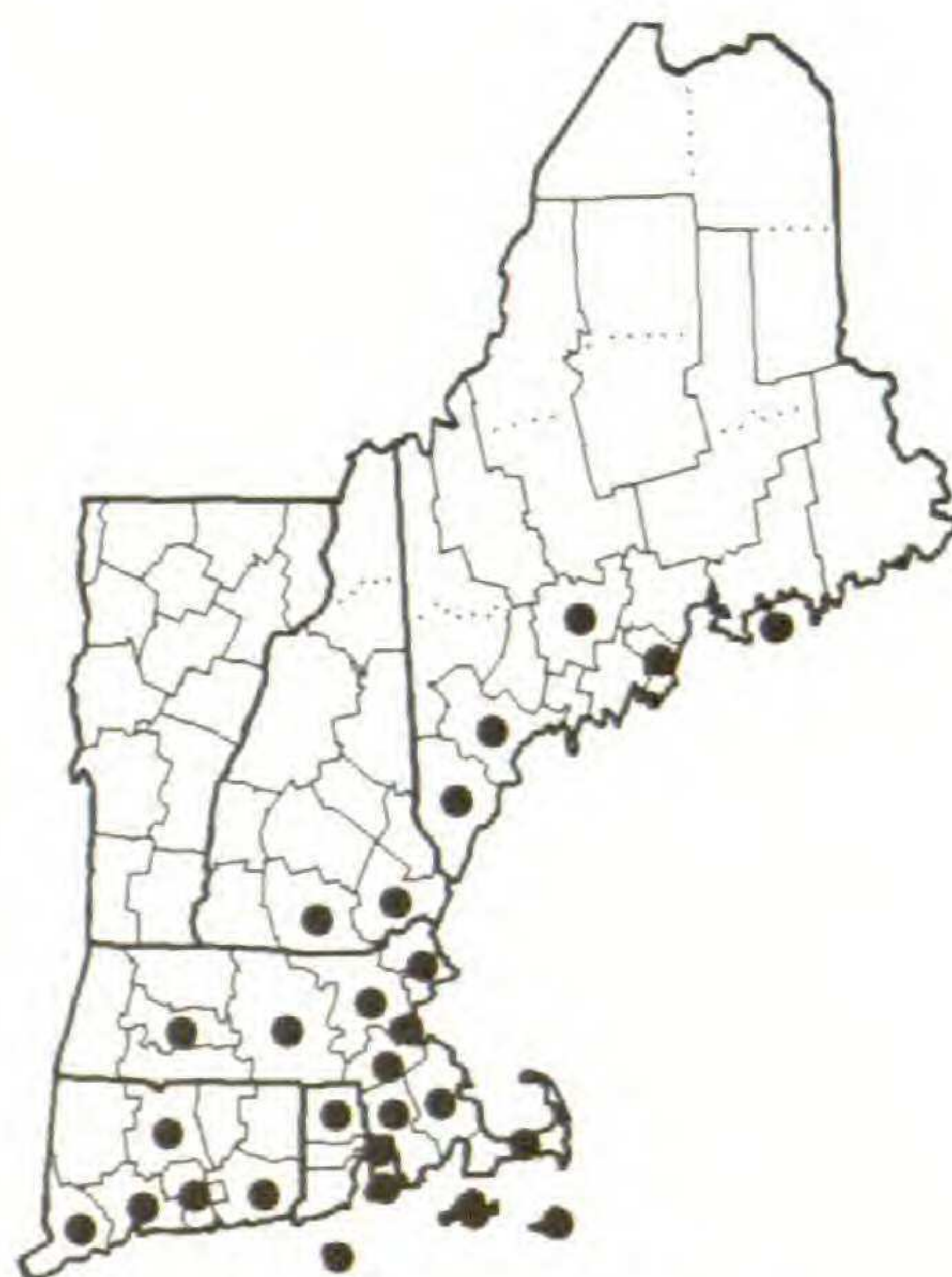
Bromus ciliatus



BROMUS COMMUTATUS



BROMUS ERECTUS



BROMUS HORDEACEUS
subsp. *HORDEACEUS*

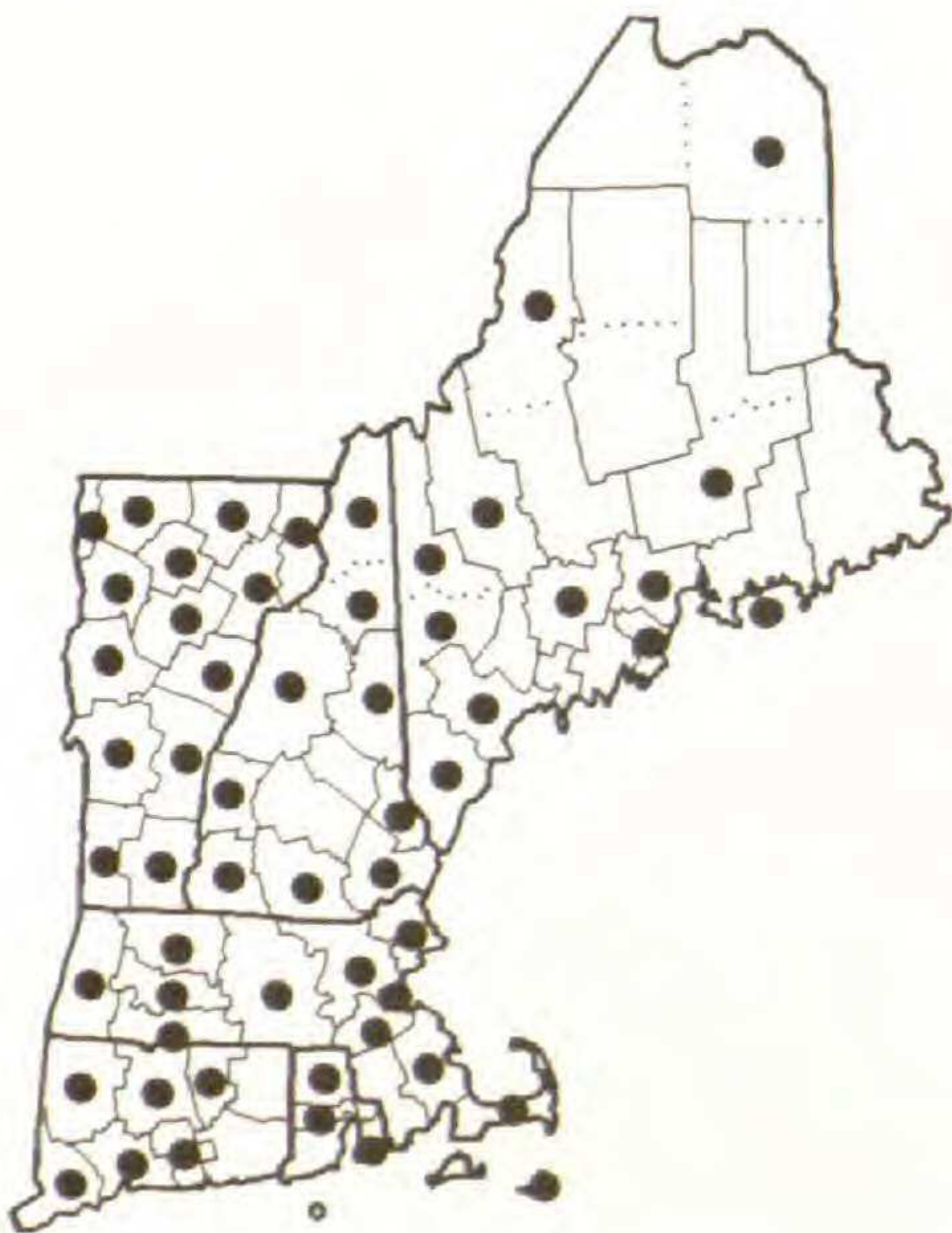
Figure 16. Distribution maps for *Bromus ciliatus*, *B. COMMUTATUS*, *B. ERECTUS* and *B. HORDEACEUS* subsp. *HORDEACEUS*.



BROMUS HORDEACEUS
subsp. *PSEUDOTHOMINEI*



BROMUS HORDEACEUS
subsp. *THOMINEI*



BROMUS INERMIS

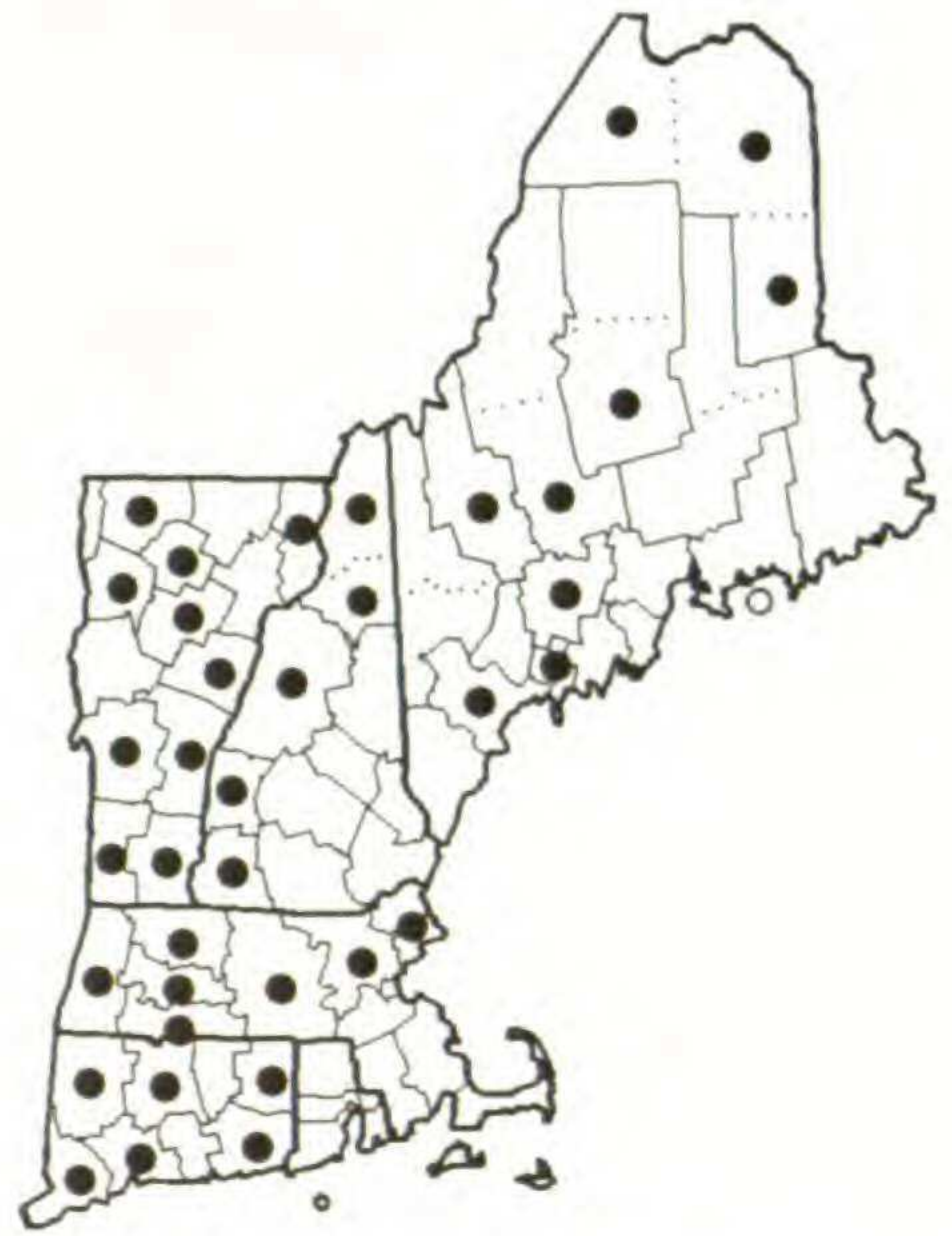


BROMUS JAPONICUS

Figure 17. Distribution maps for *BROMUS HORDEACEUS* subsp. *PSEUDOTHOMINEI*, *B. HORDEACEUS* subsp. *THOMINEI*, *B. INERMIS* and *B. JAPONICUS*.



Bromus kalmii



Bromus latiglumis

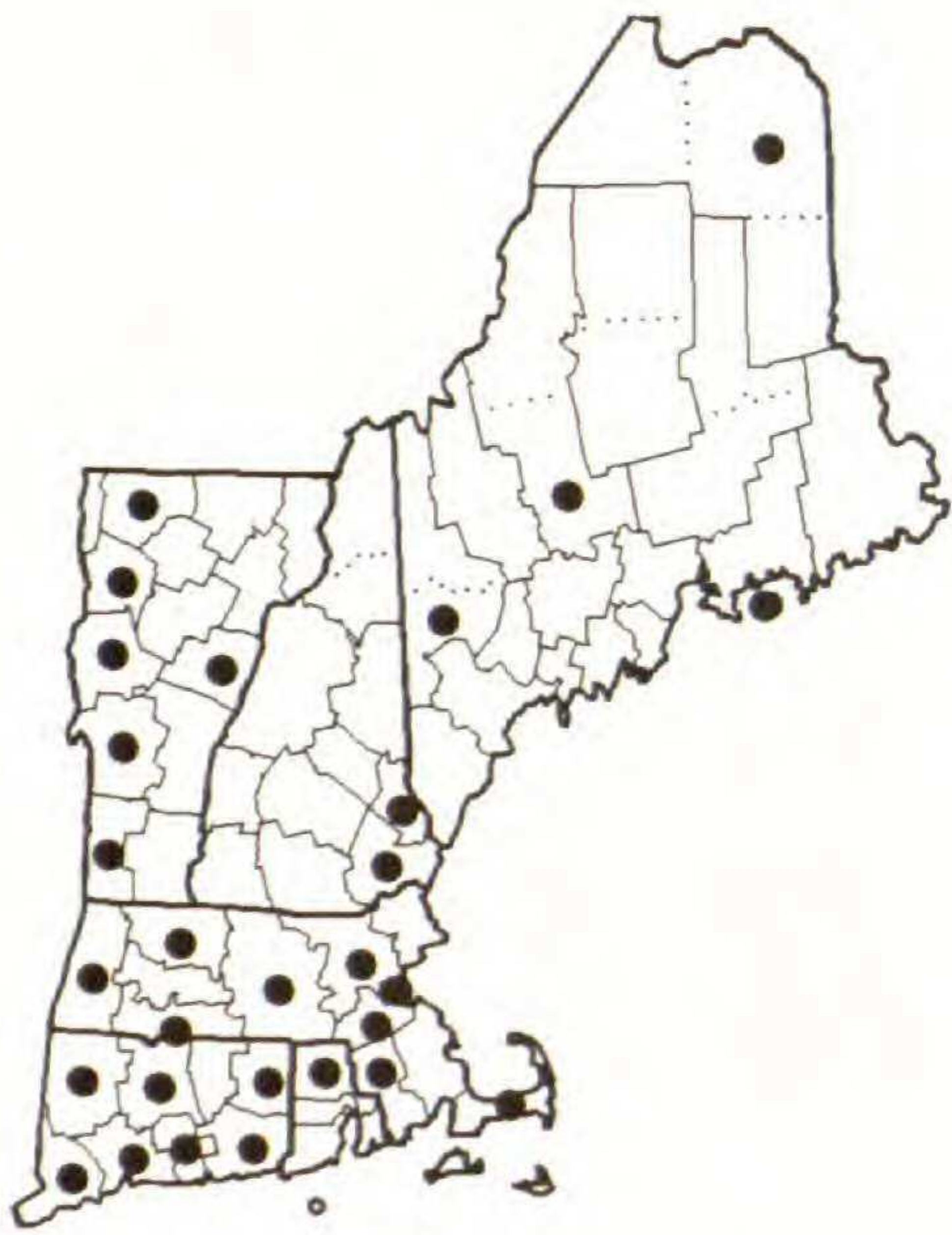


BROMUS LEPIDUS



BROMUS MARGINATUS

Figure 18. Distribution maps for *Bromus kalmii*, *B. latiglumis*, *B. LEPIDUS* and *B. MARGINATUS*.



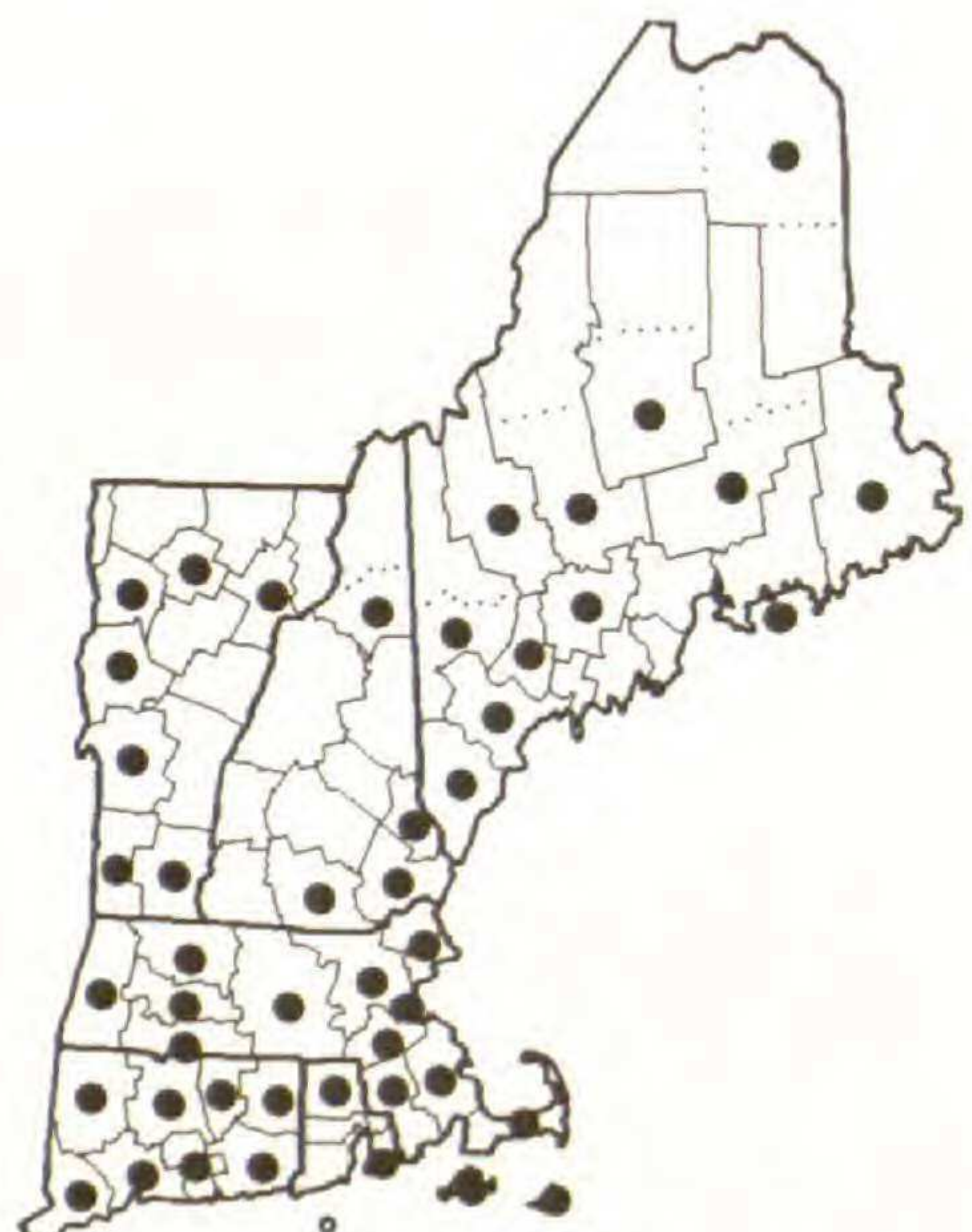
Bromus pubescens



BROMUS RACEMOSUS



BROMUS RIGIDUS



BROMUS SECALINUS

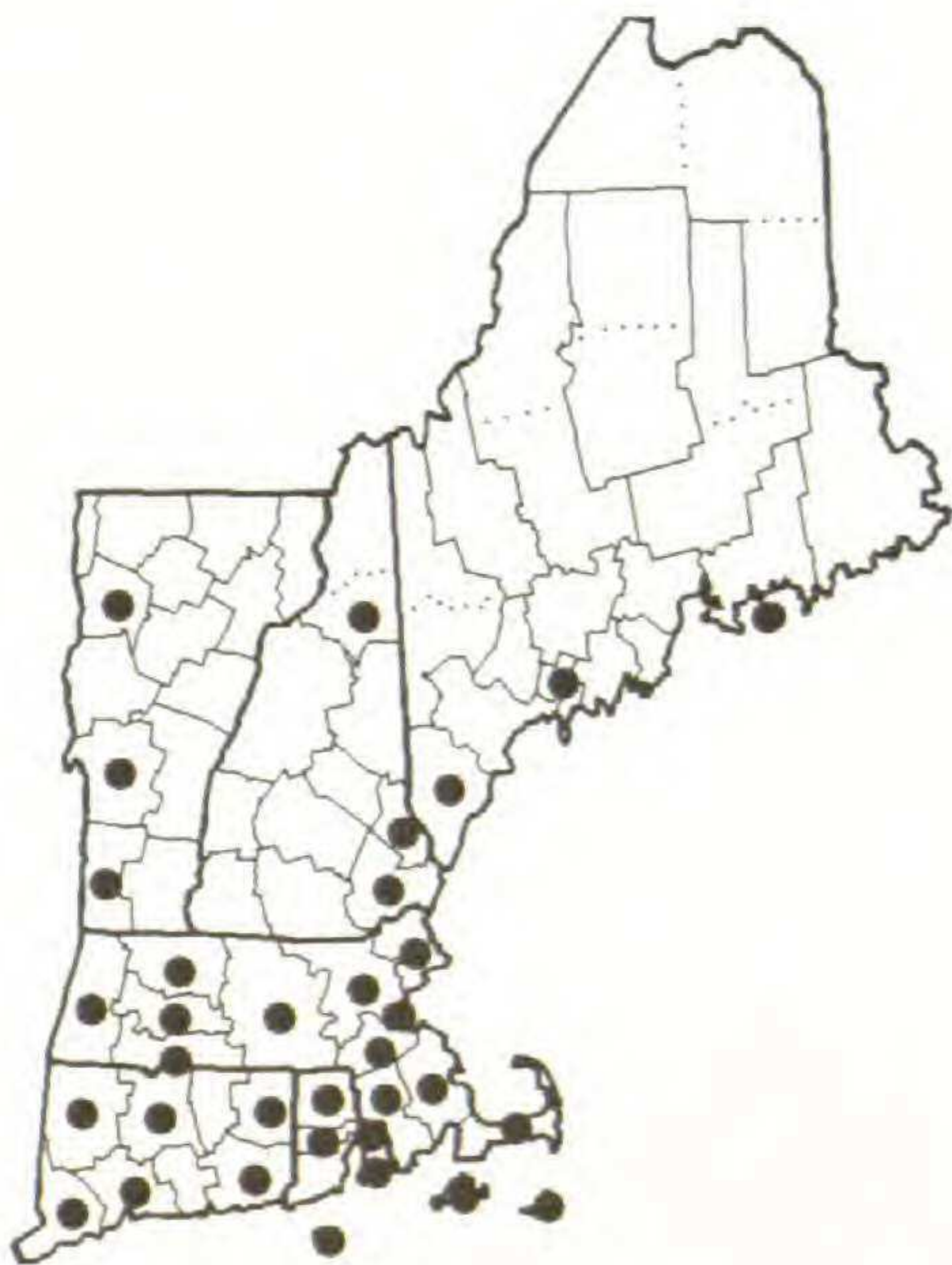
Figure 19. Distribution maps for *Bromus pubescens*, *B. RACEMOSUS*, *B. RIGIDUS* and *B. SECALINUS*.



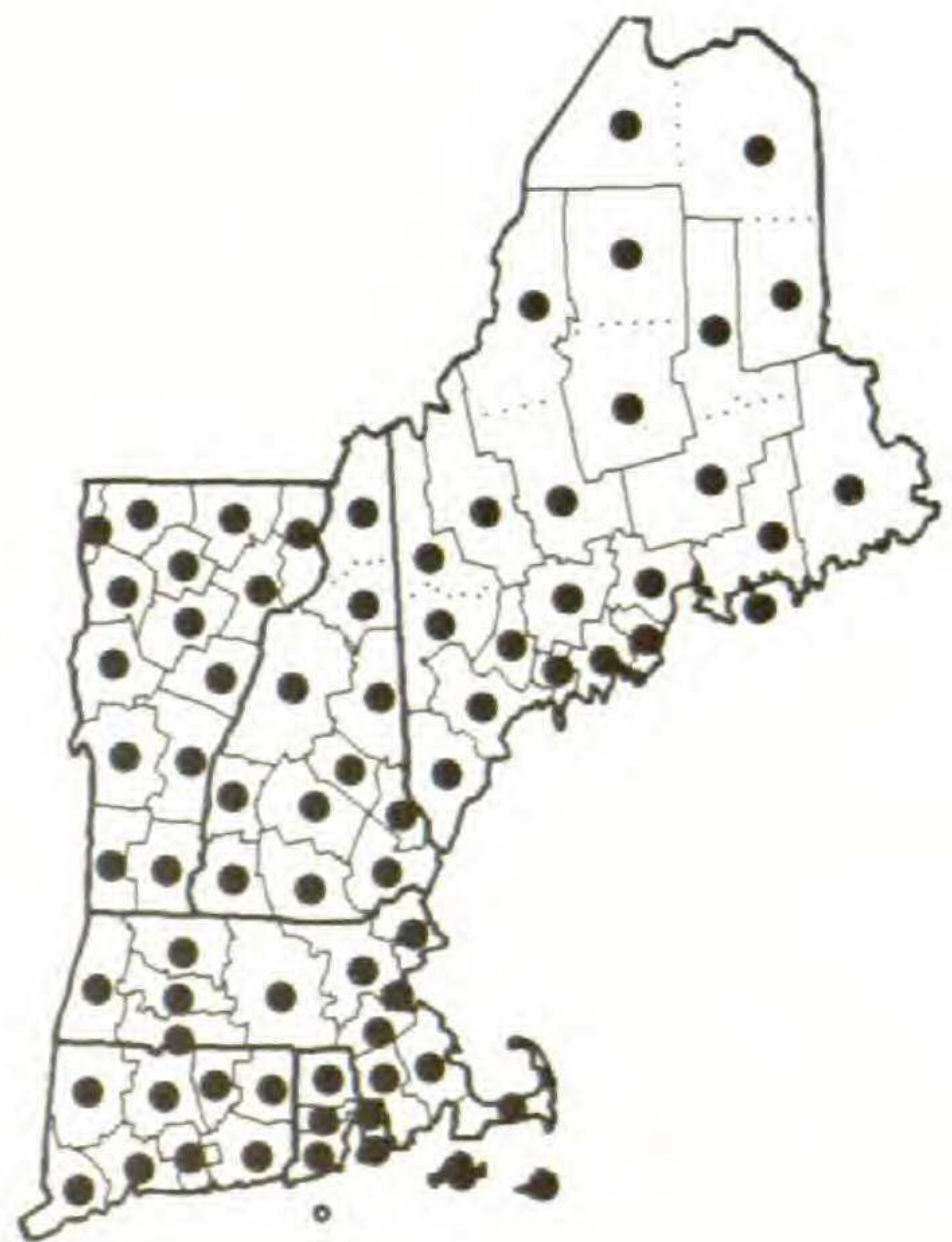
BROMUS SQUARROSUS



BROMUS STERILIS



BROMUS TECTORUM



Calamagrostis canadensis
var. *canadensis*

Figure 20. Distribution maps for *BROMUS SQUARROSUS*, *B. STERILIS*, *B. TECTORUM* and *Calamagrostis canadensis* var. *canadensis*.

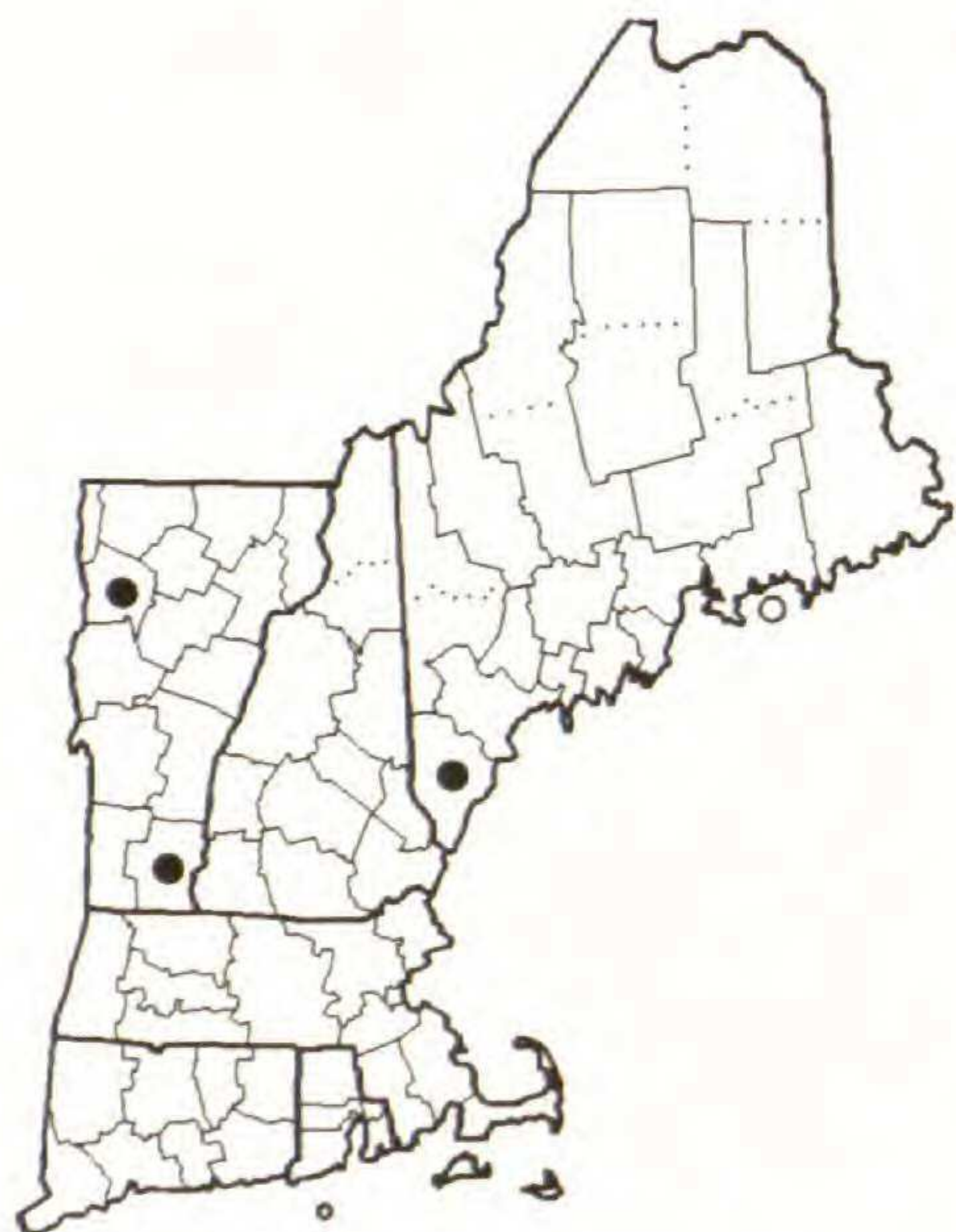
*CENCHRUS SPINIFEX**CENCHRUS TRIBULOIDES**CHLORIS CUCULLATA**CHLORIS GAYANA*

Figure 23. Distribution maps for *CENCHRUS SPINIFEX*, *C. TRIBULOIDES*, *CHLORIS CUCULLATA* and *C. GAYANA*.



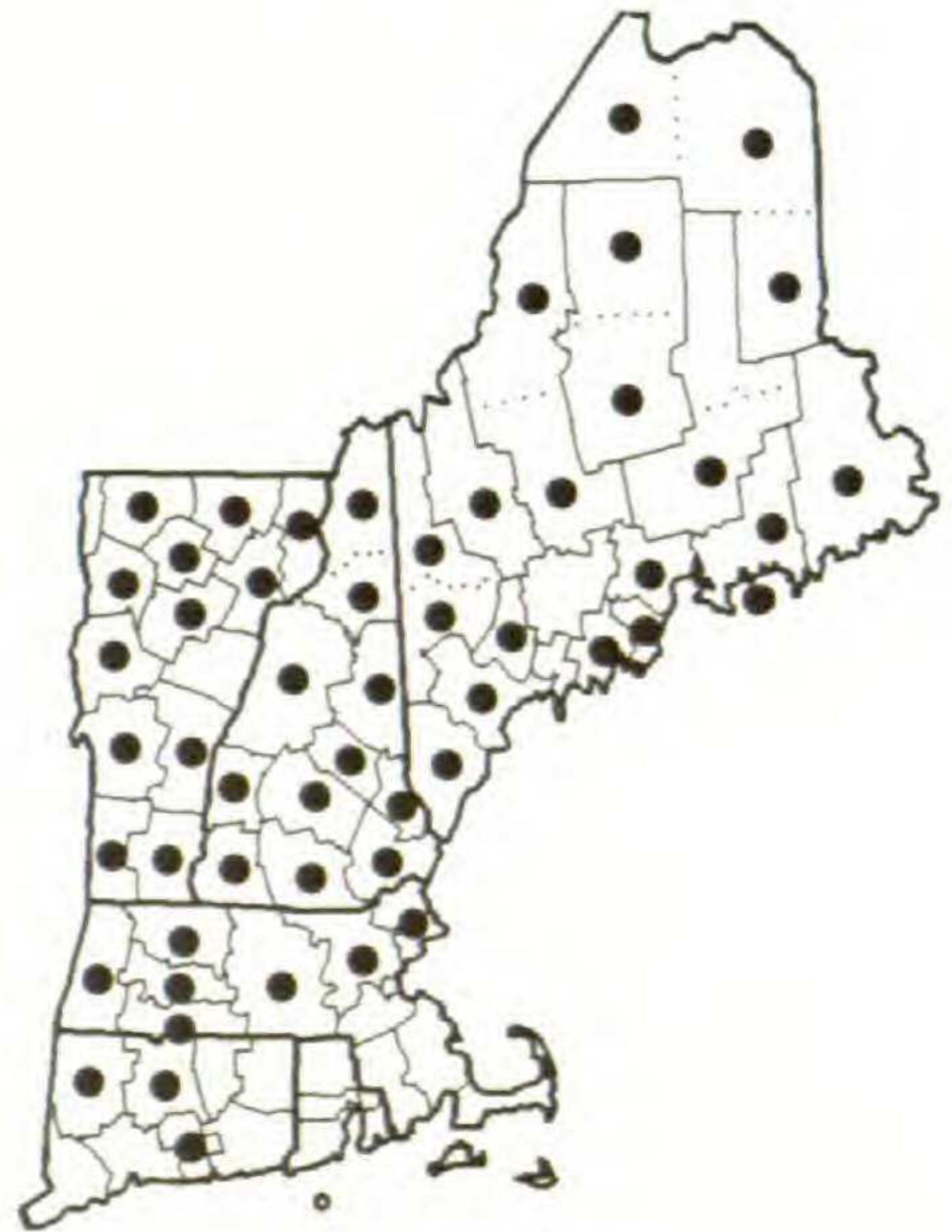
CHLORIS VERTICILLATA



CHLORIS VIRGATA



Cinna arundinacea

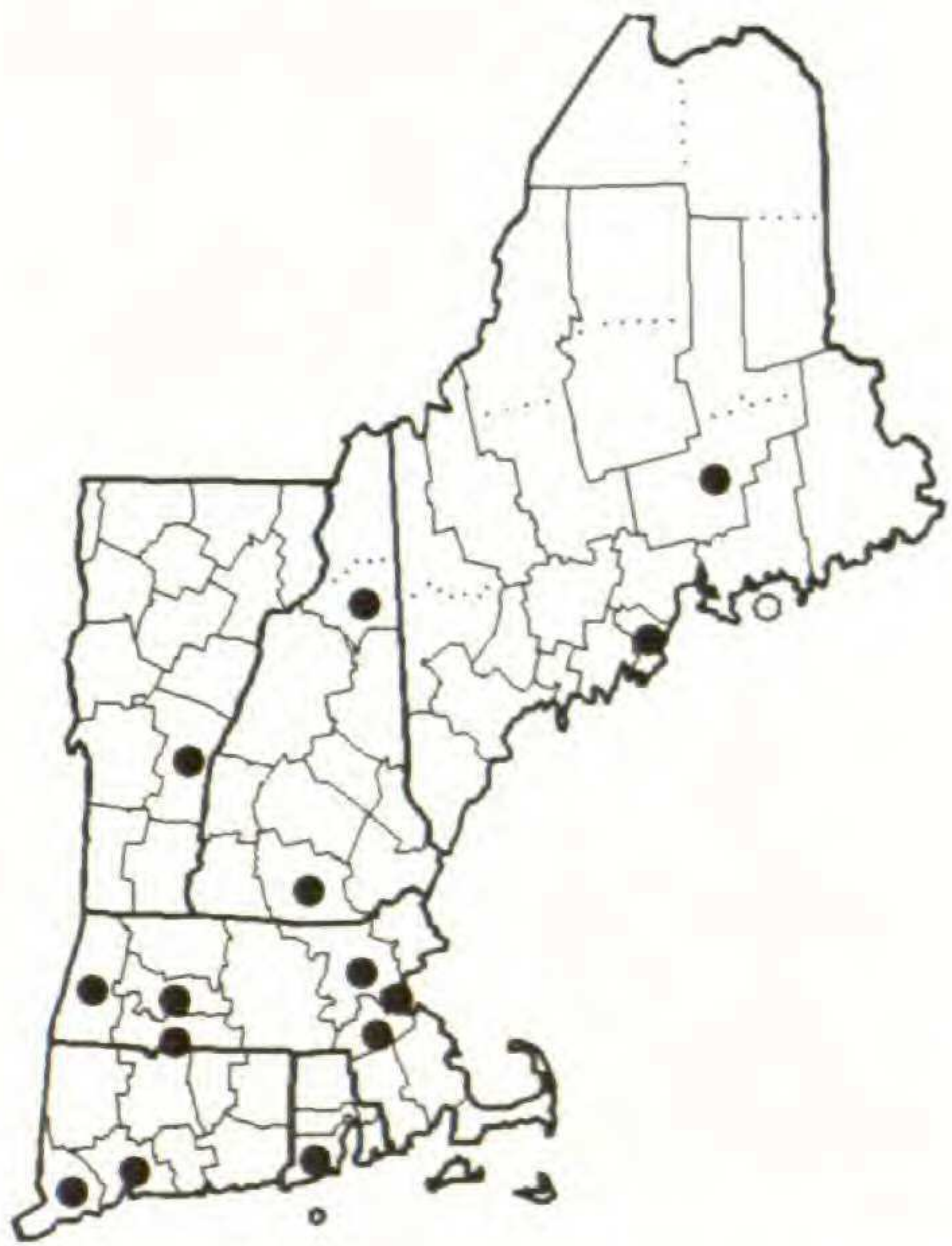


Cinna latifolia

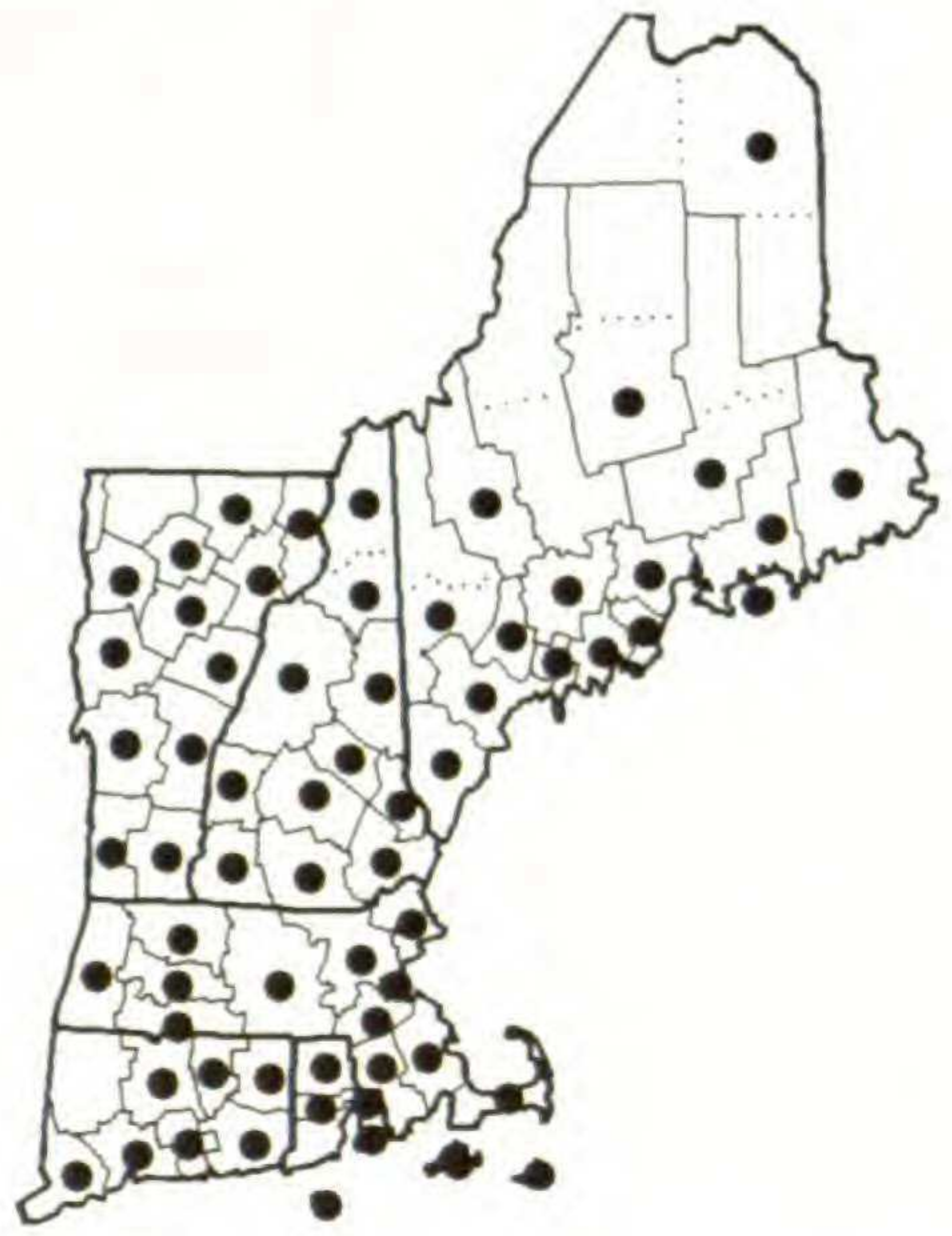
Figure 24. Distribution maps for *CHLORIS VERTICILLATA*, *C. VIRGATA*, *Cinna arundinacea* and *C. latifolia*.

*CORYNEPHORUS CANESCENS**CRYPISIS SCHOENOIDES**CYNODON ARISTIGLUMIS**CYNODON DACTYLON*

Figure 25. Distribution maps for *CORYNEPHORUS CANESCENS*, *CRYPISIS SCHOENOIDES*, *CYNODON ARISTIGLUMIS* and *C. DACTYLON*.



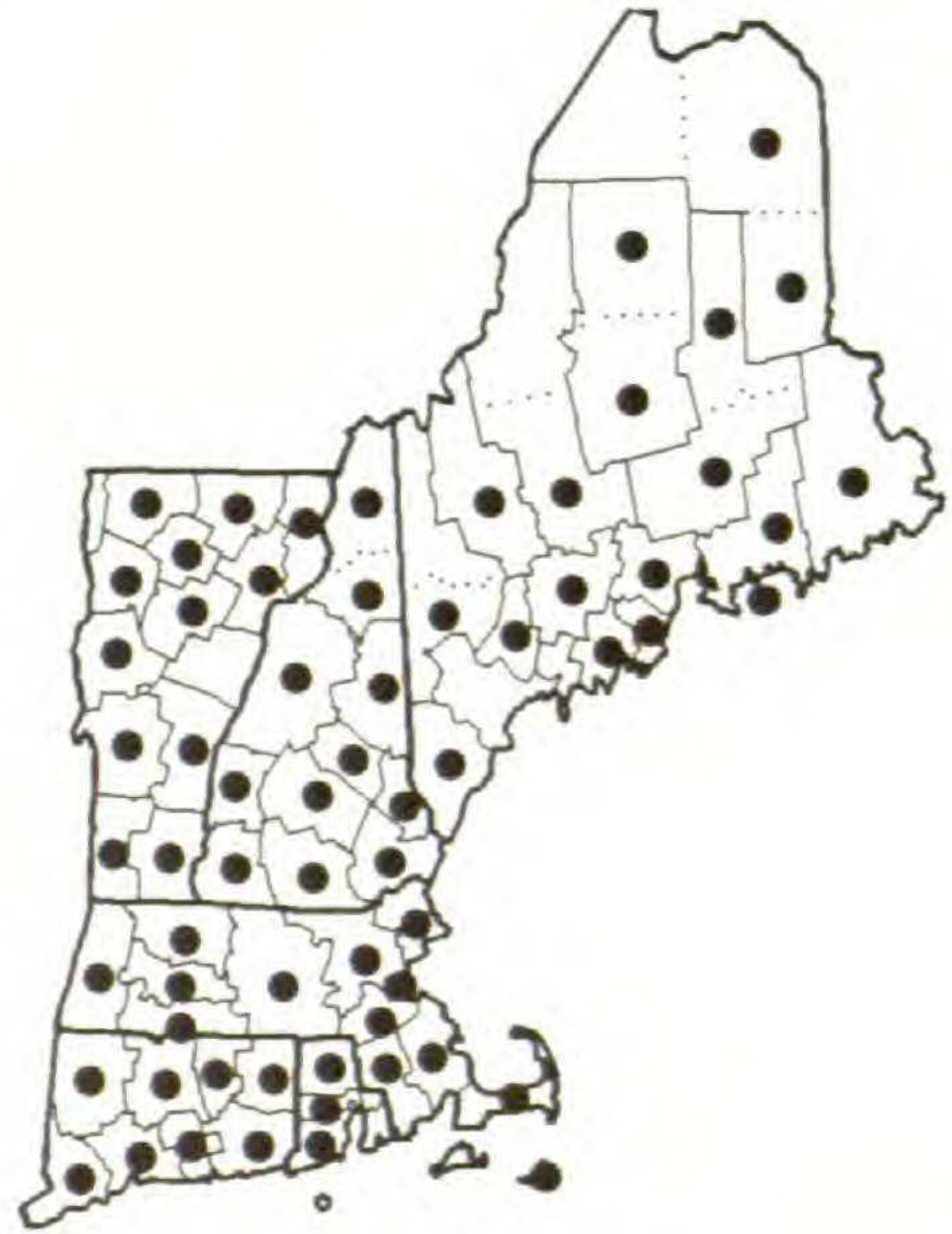
CYNOSURUS CRISTATUS



DACTYLIS GLOMERATA

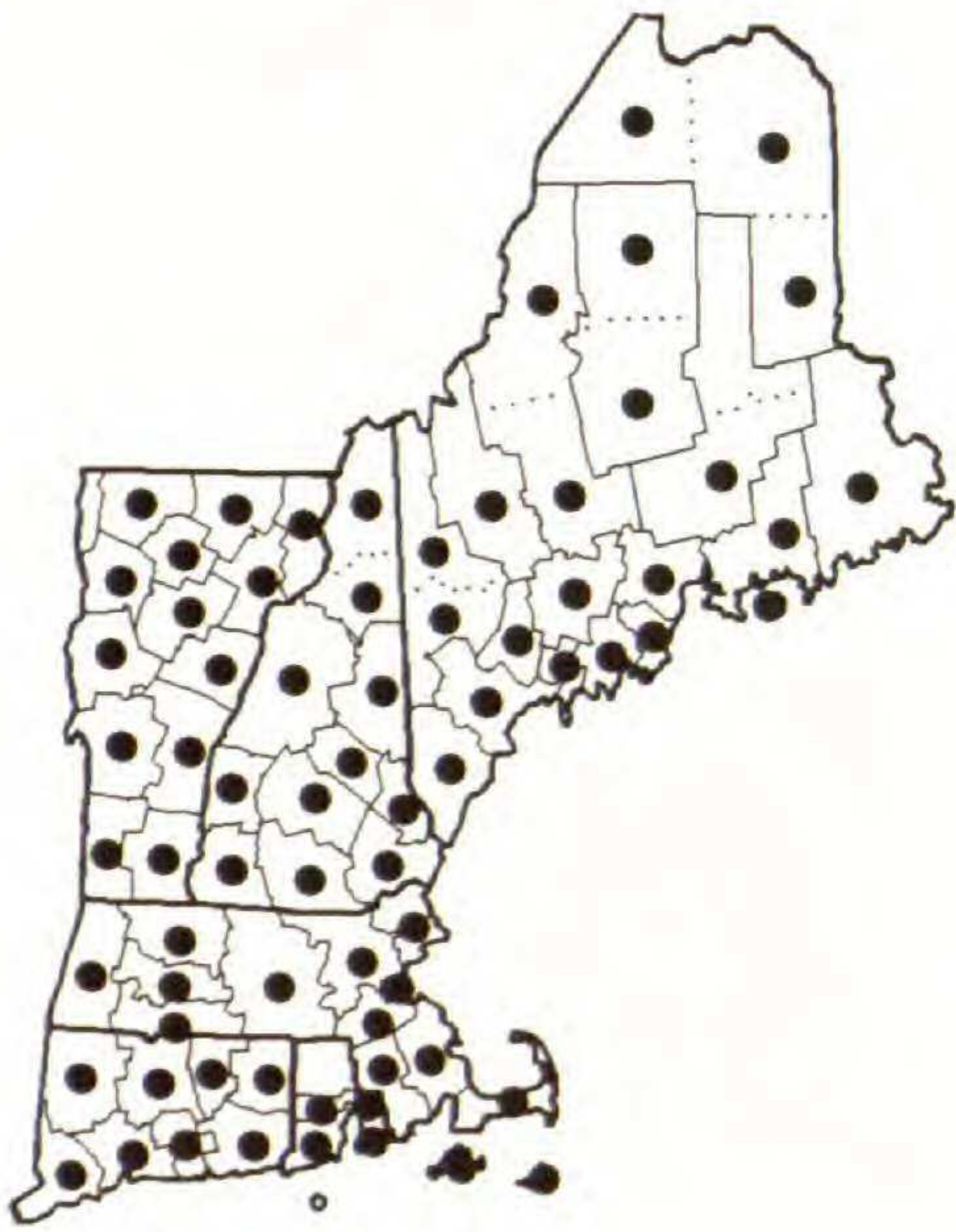


DACTYLOCTENIUM AEGYPTIUM

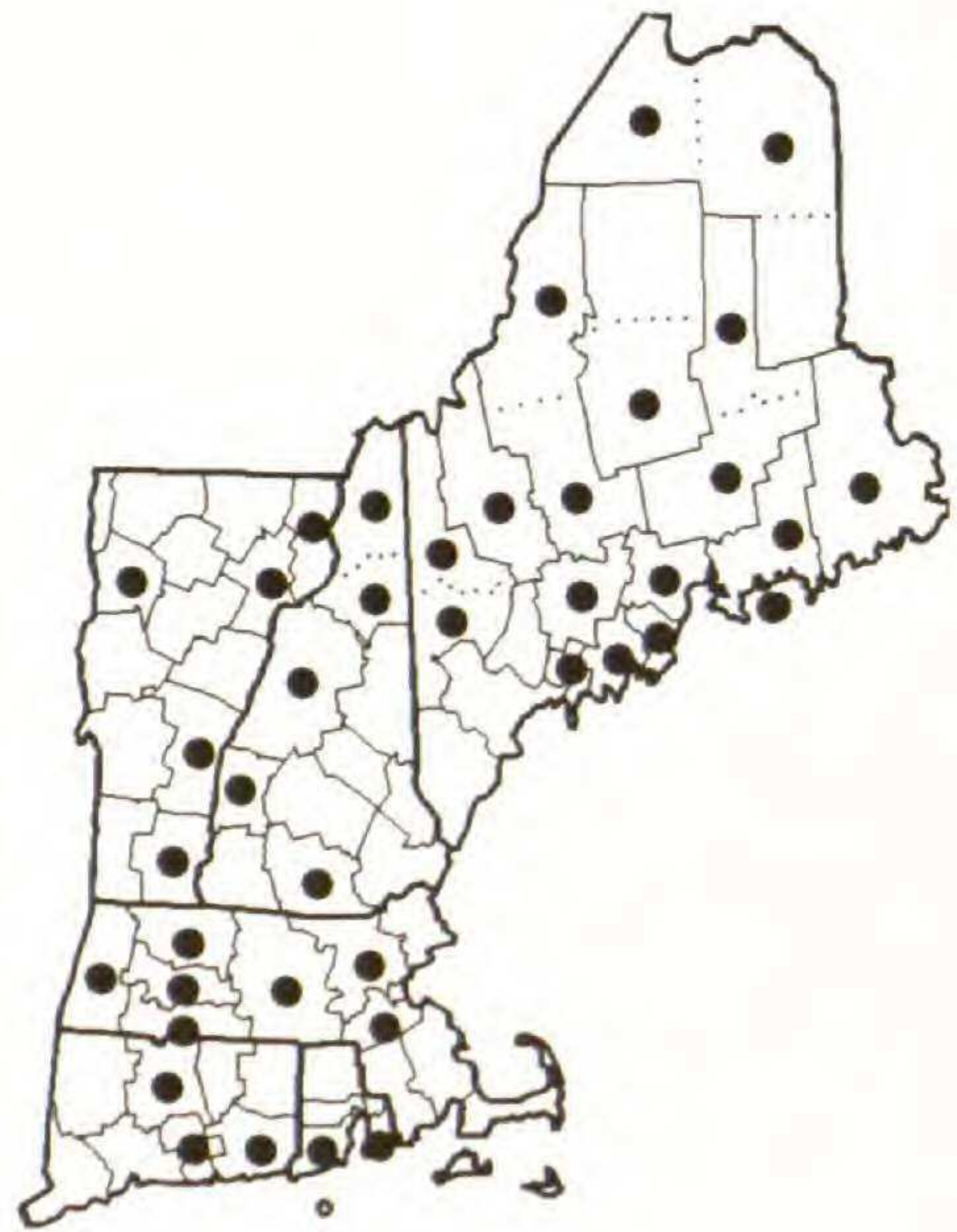


Danthonia compressa

Figure 26. Distribution maps for *CYNOSURUS CRISTATUS*, *DACTYLIS GLOMERATA*, *DACTYLOCTENIUM AEGYPTIUM* and *Danthonia compressa*.



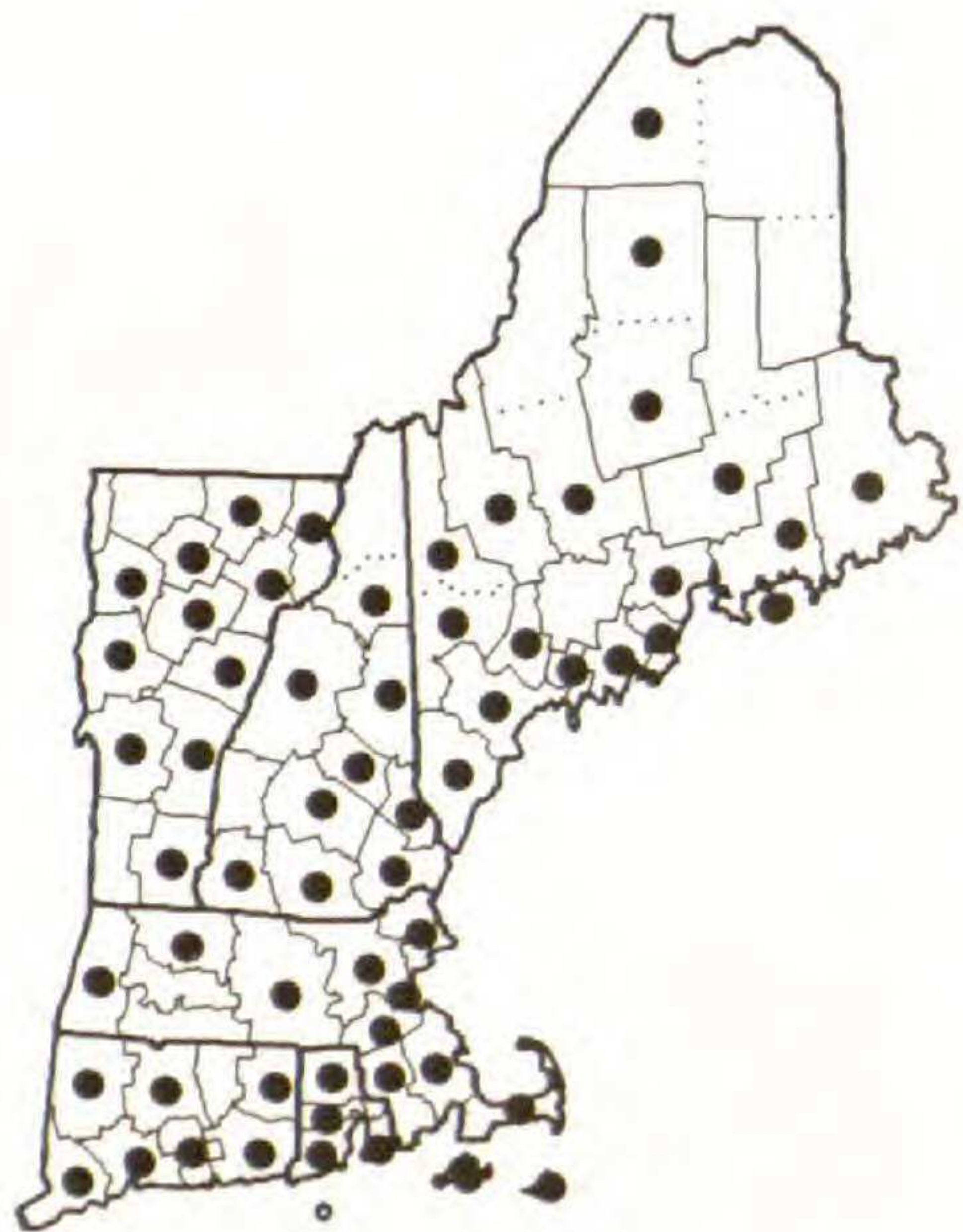
Danthonia spicata



Deschampsia cespitosa



DESCHAMPSIA DANTHONIOIDES



Deschampsia flexuosa

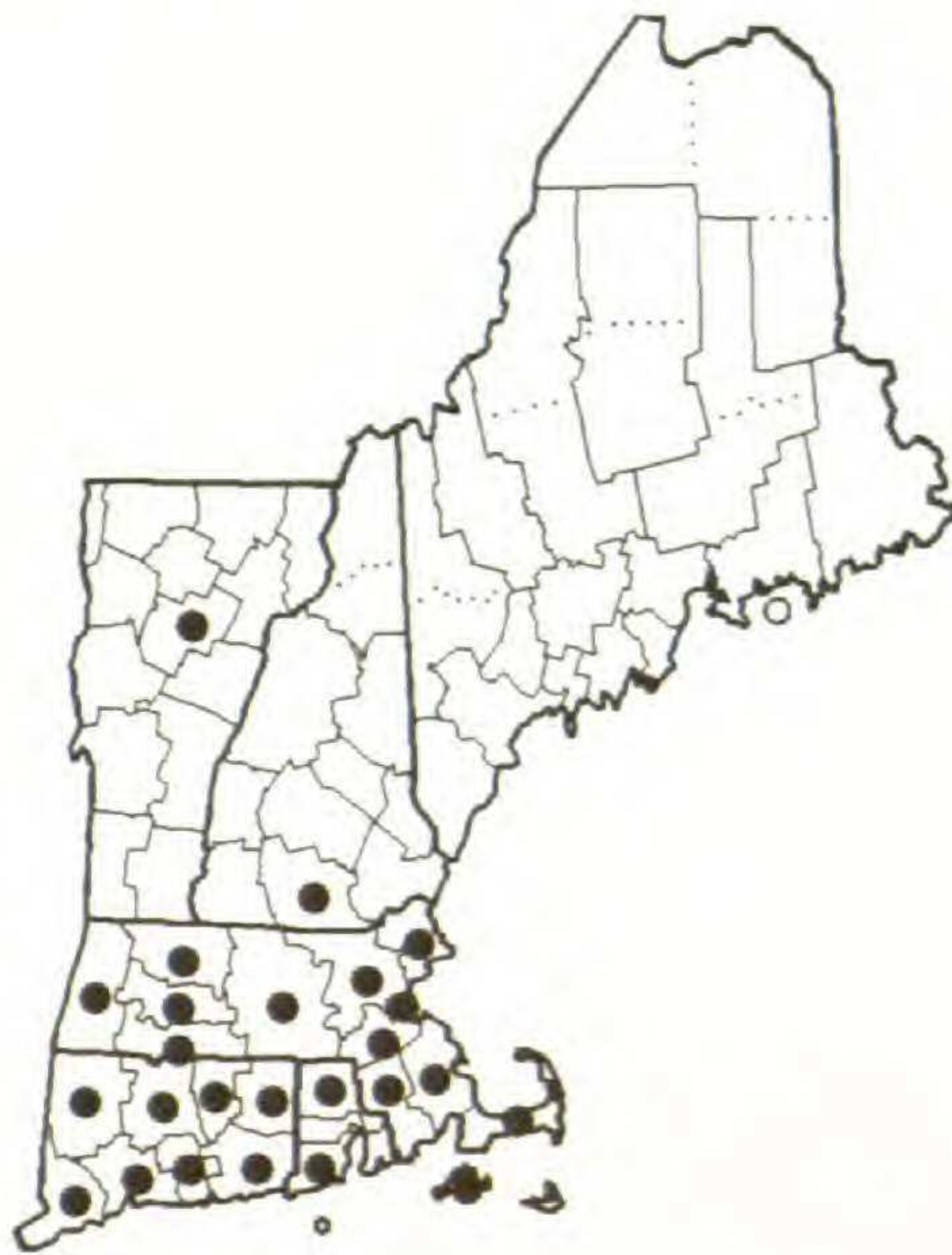
Figure 27. Distribution maps for *Danthonia spicata*, *Deschampsia cespitosa*, *D. DANTHONIOIDES* and *D. flexuosa*.



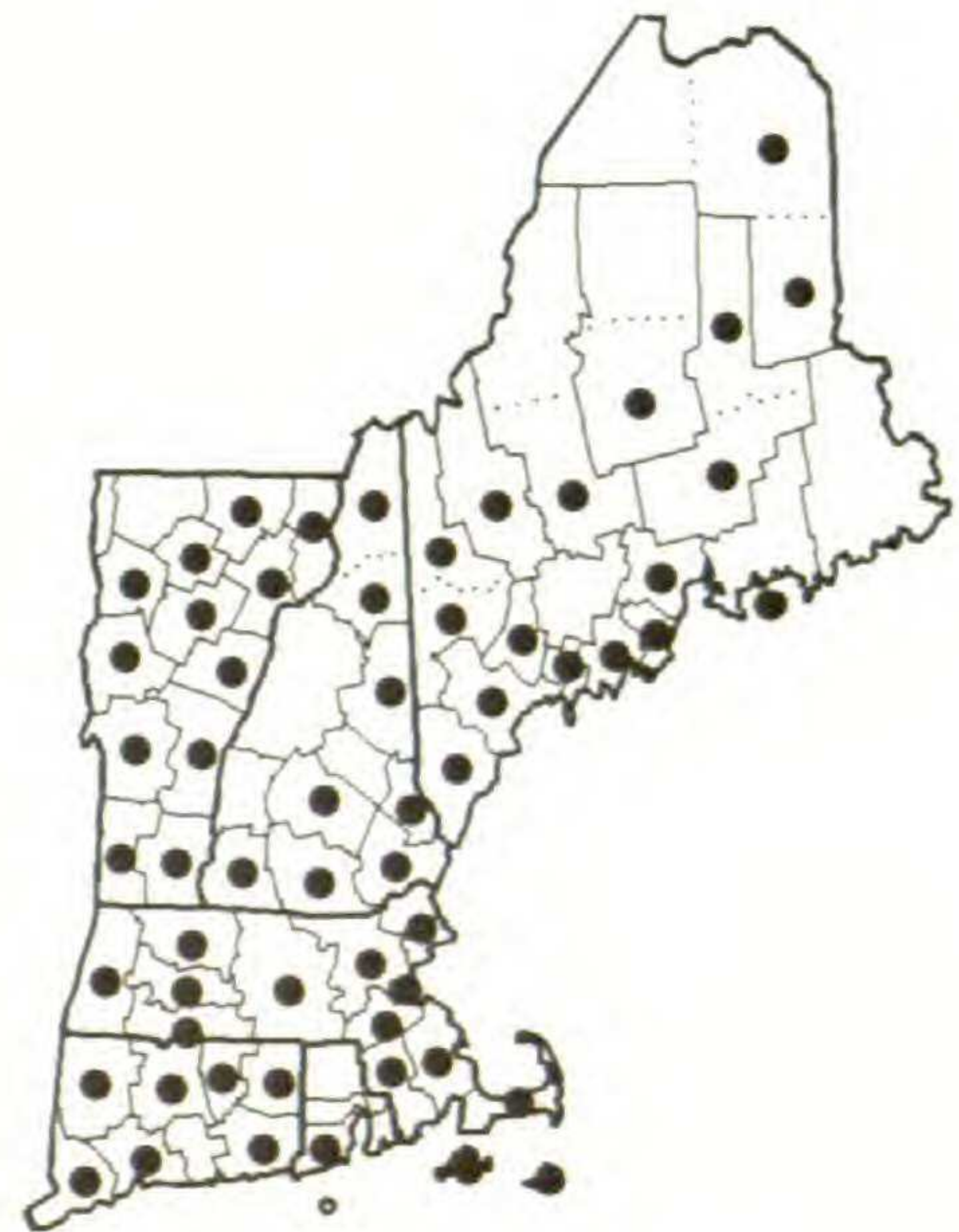
DESMAZERIA RIGIDA



Digitaria cognata



Digitaria filiformis



DIGITARIA ISCHAEMUM

Figure 28. Distribution maps for *DESMAZERIA RIGIDA*, *Digitaria cognata*, *D. filiformis* and *D. ISCHAEMUM*.

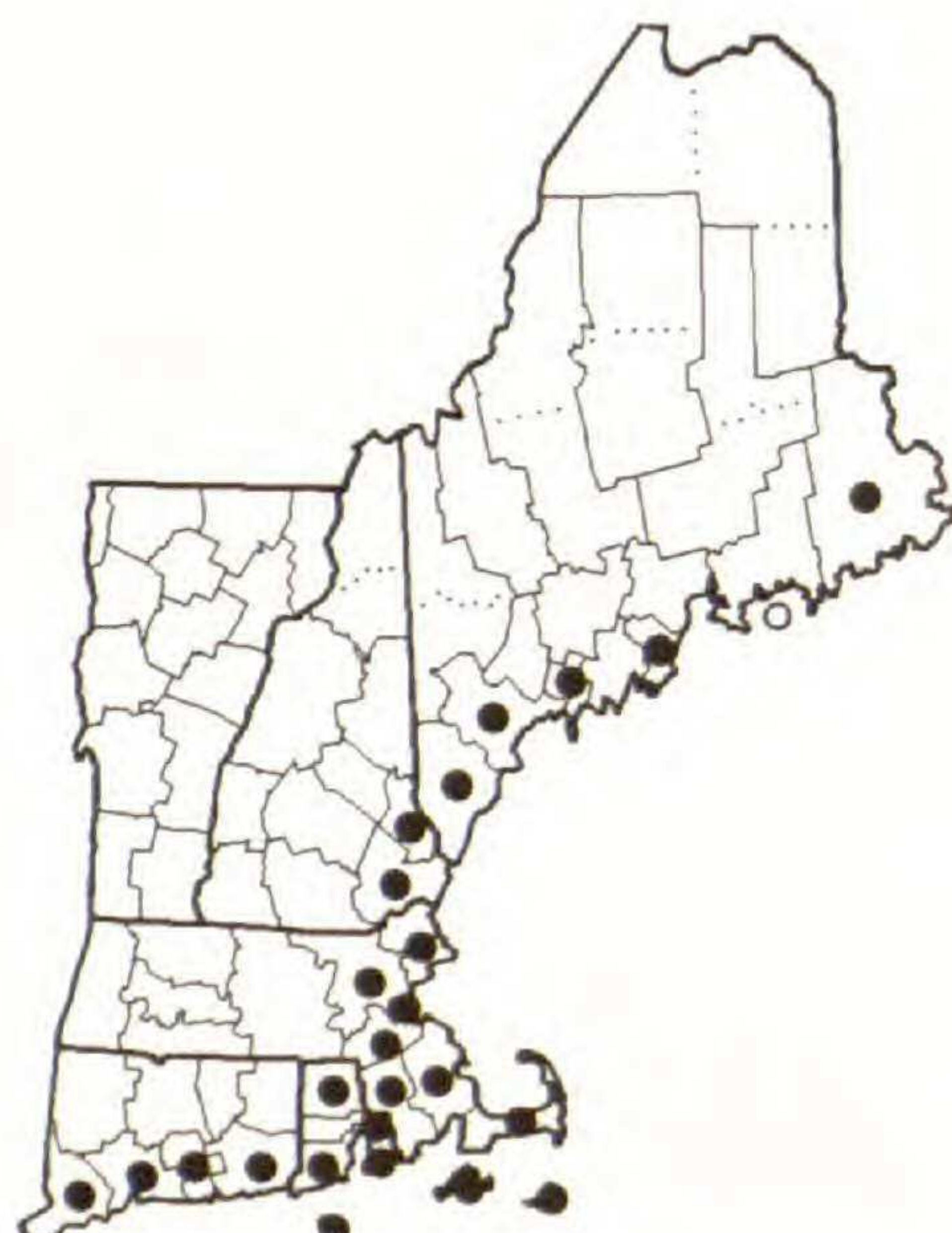
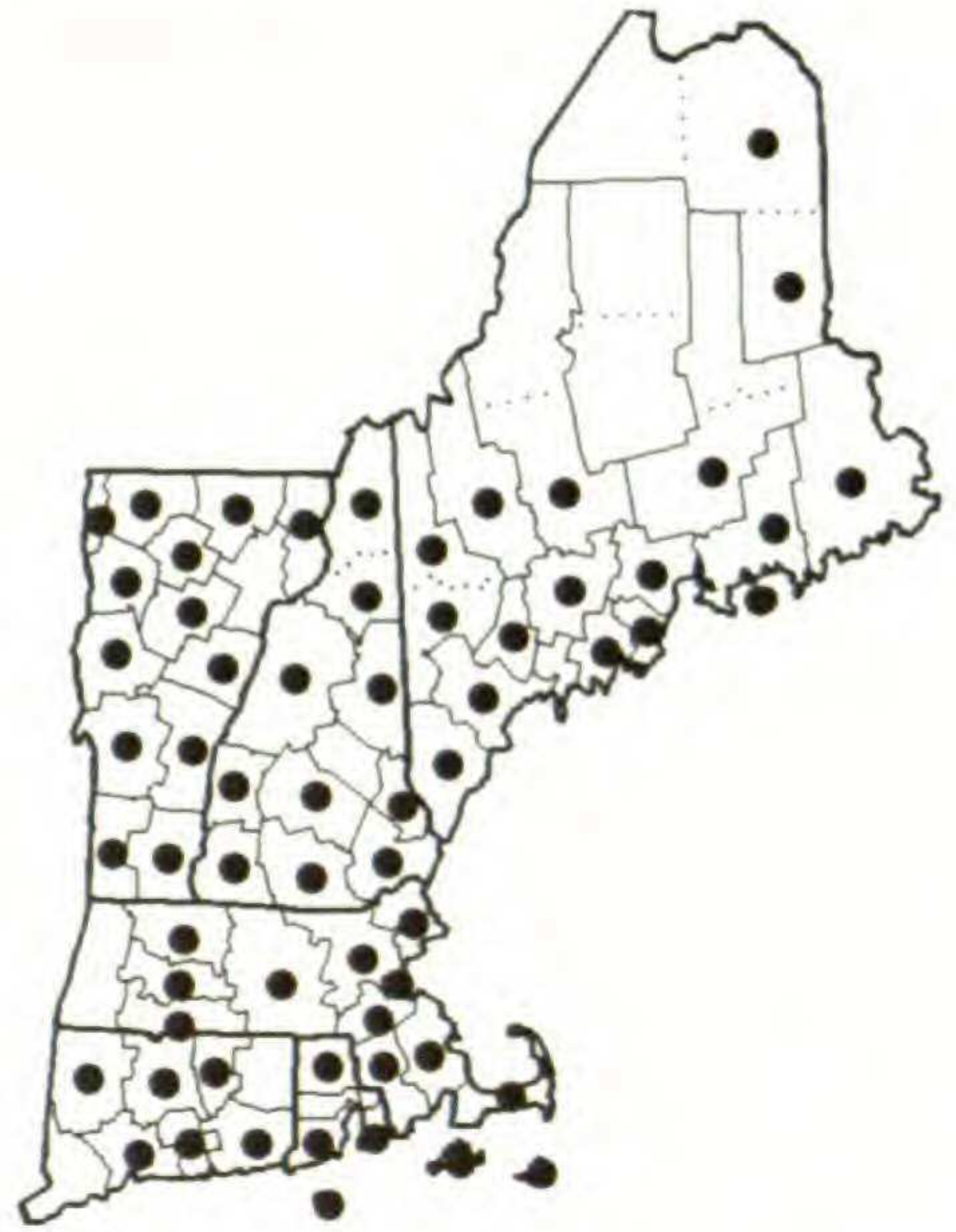
*DIGITARIA SANGUINALIS**DIGITARIA VIOLASCENS**DIGITARIA ISCHAEMUM* x
D. SANGUINALIS*Distichlis spicata*

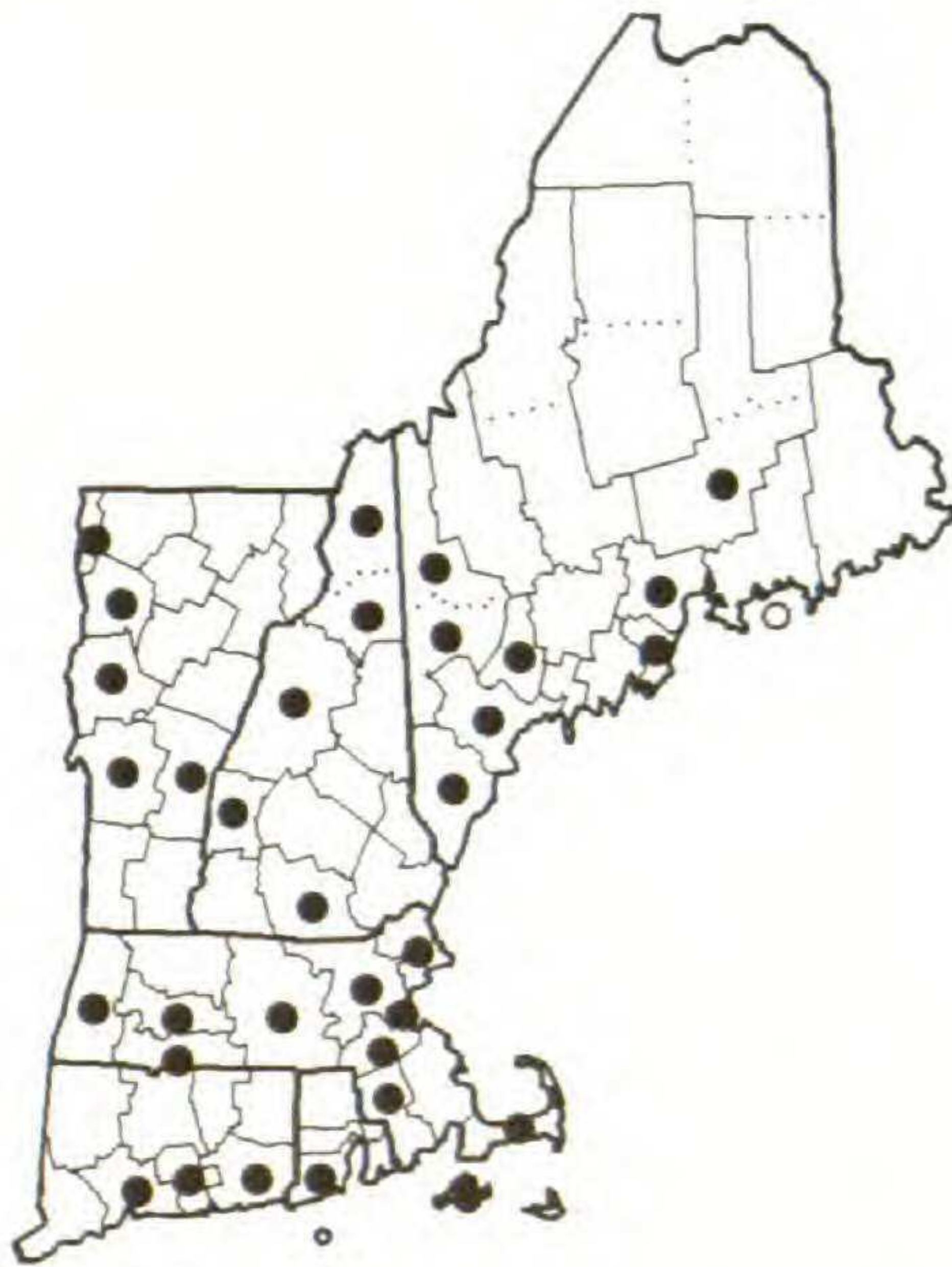
Figure 29. Distribution maps for *DIGITARIA SANGUINALIS*, *D. VIOLASCENS*, *D. ISCHAEMUM* x *D. SANGUINALIS* and *Distichlis spicata*.



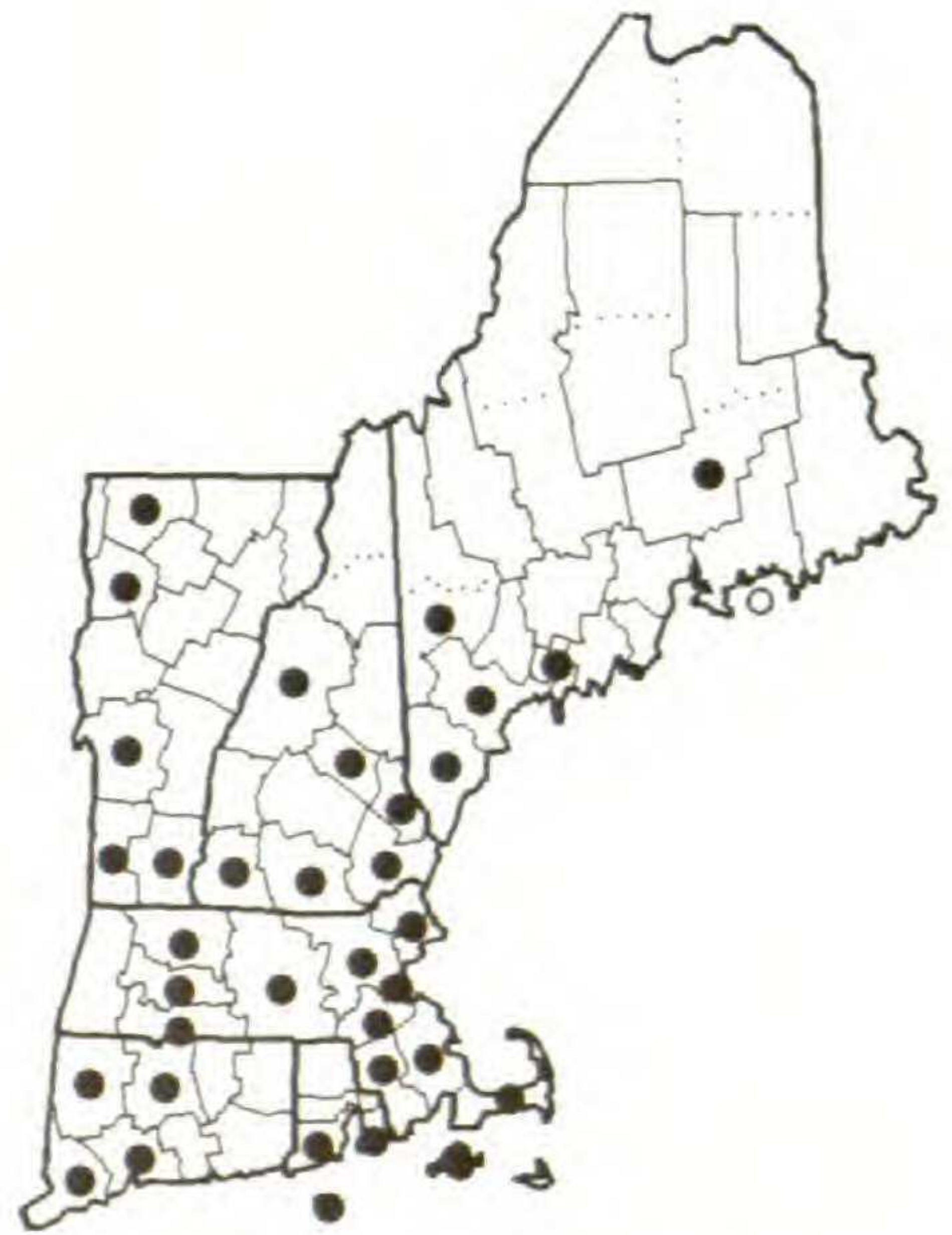
ECHINOCHLOA COLONA



ECHINOCHLOA CRUSGALLI

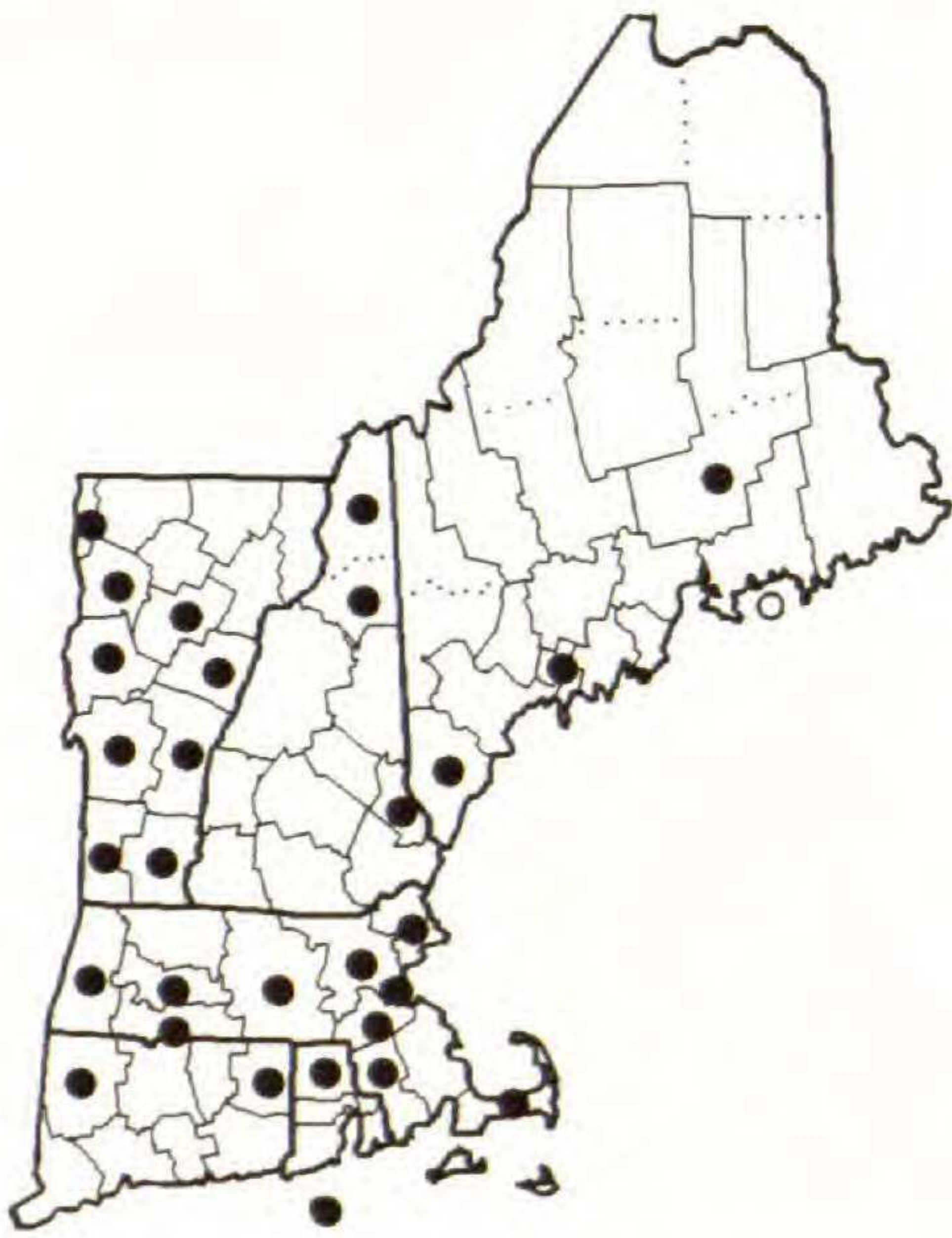


ECHINOCHLOA FRUMENTACEA



Echinochloa muricata
var. *muricata*

Figure 30. Distribution maps for *ECHINOCHLOA COLONA*, *E. CRUSGALLI*, *E. FRUMENTACEA* and *E. muricata* var. *muricata*.



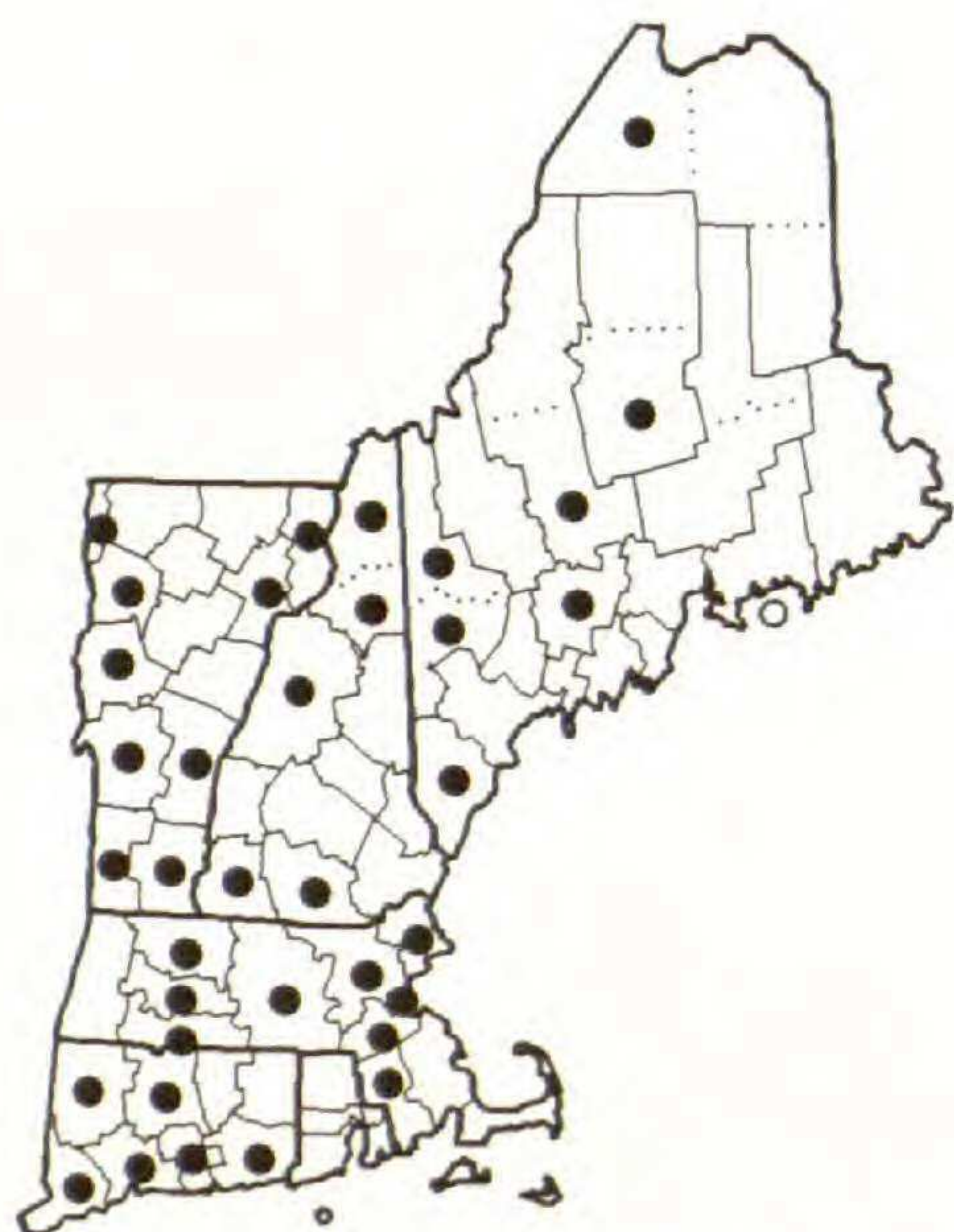
Echinochloa muricata
var. *microstachya*



Echinochloa walteri



ELEUSINE INDICA

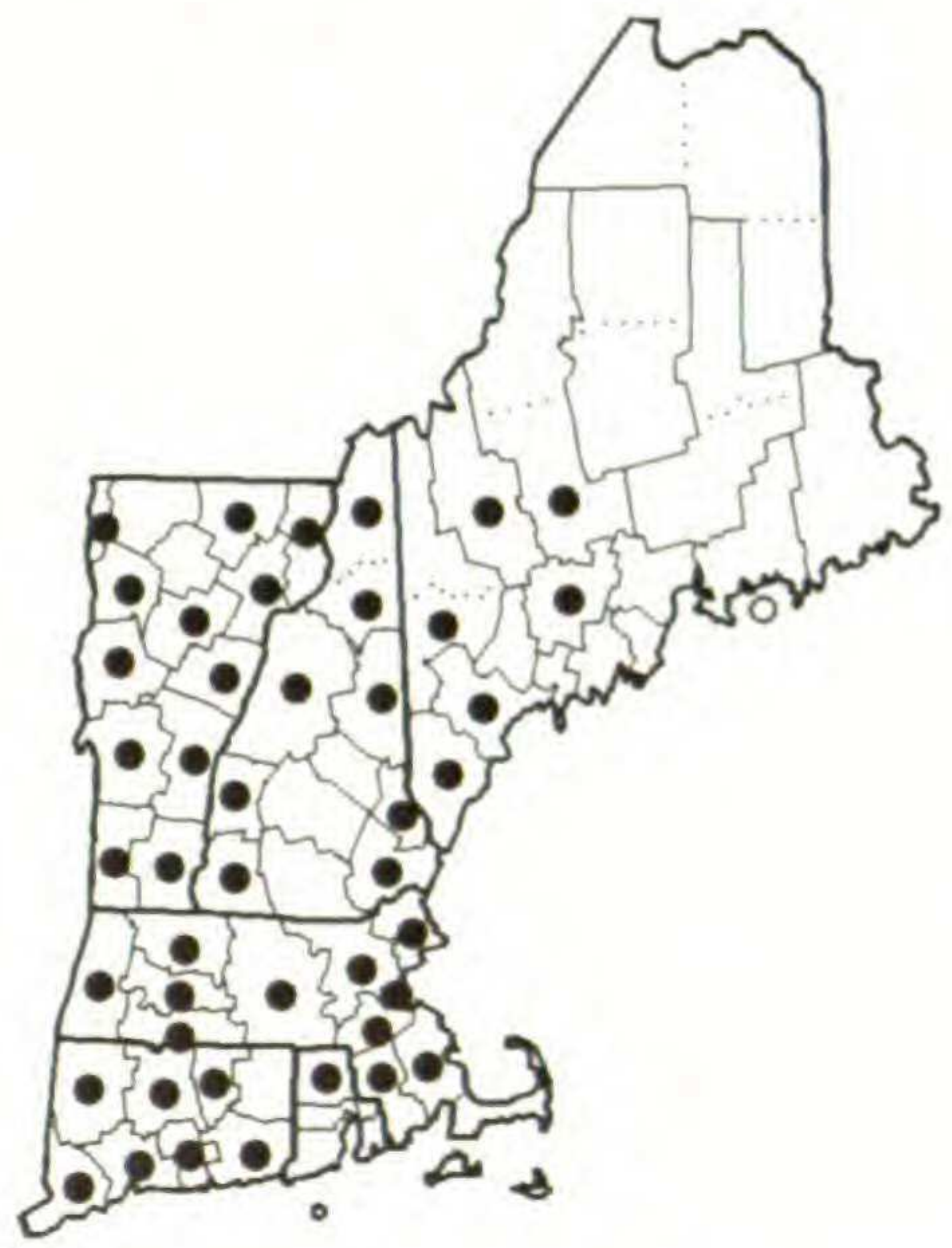


Elymus canadensis

Figure 31. Distribution maps for *Echinochloa muricata* var. *microstachya*, *E. walteri*, *ELEUSINE INDICA* and *Elymus canadensis*.



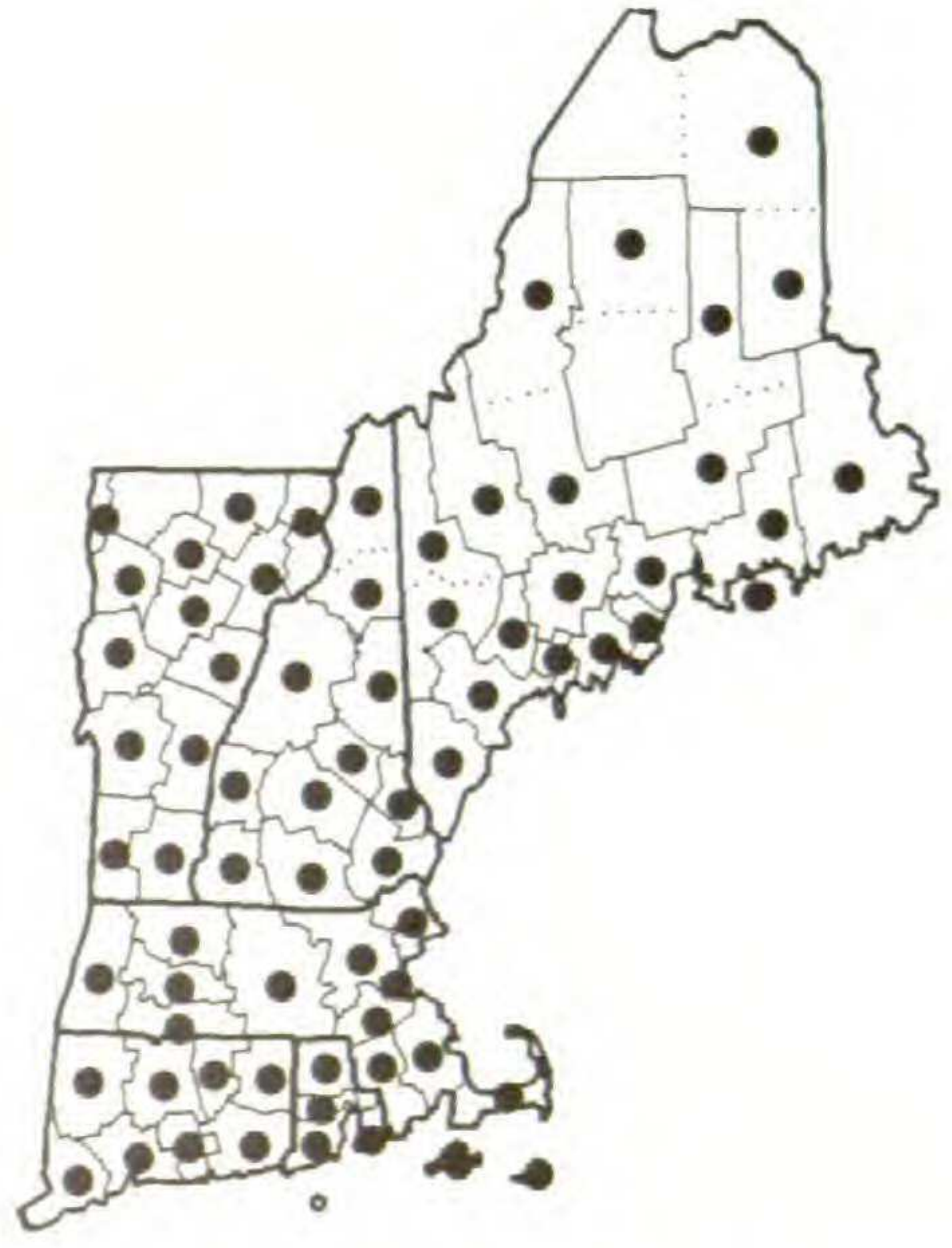
Elymus glabriflorus



Elymus hystrix



ELYMUS PYCNANTHUS



ELYMUS REPENS

Figure 32. Distribution maps for *Elymus glabriflorus*, *E. hystrix*, *E. PYCNANTHUS* and *E. REPENS*.

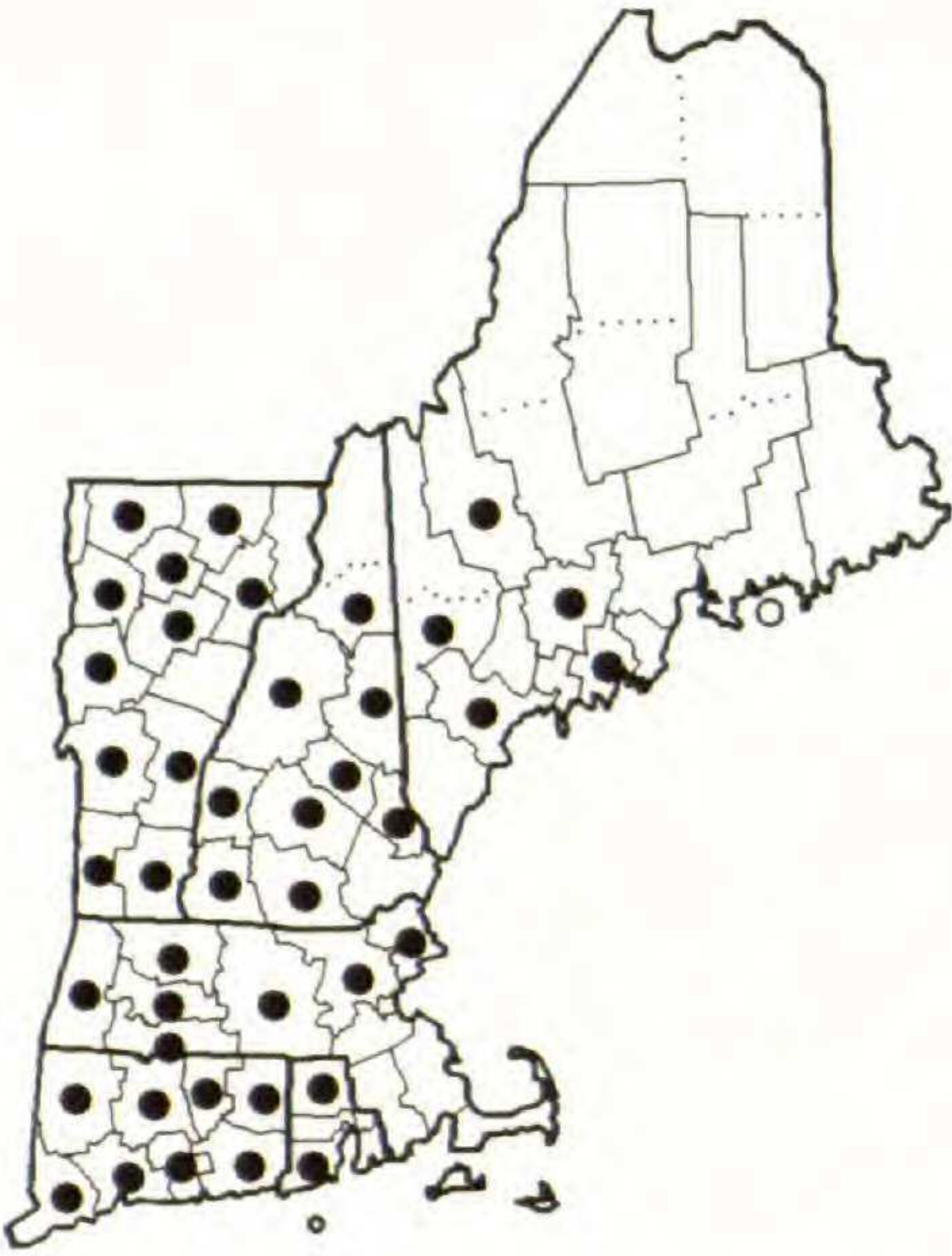
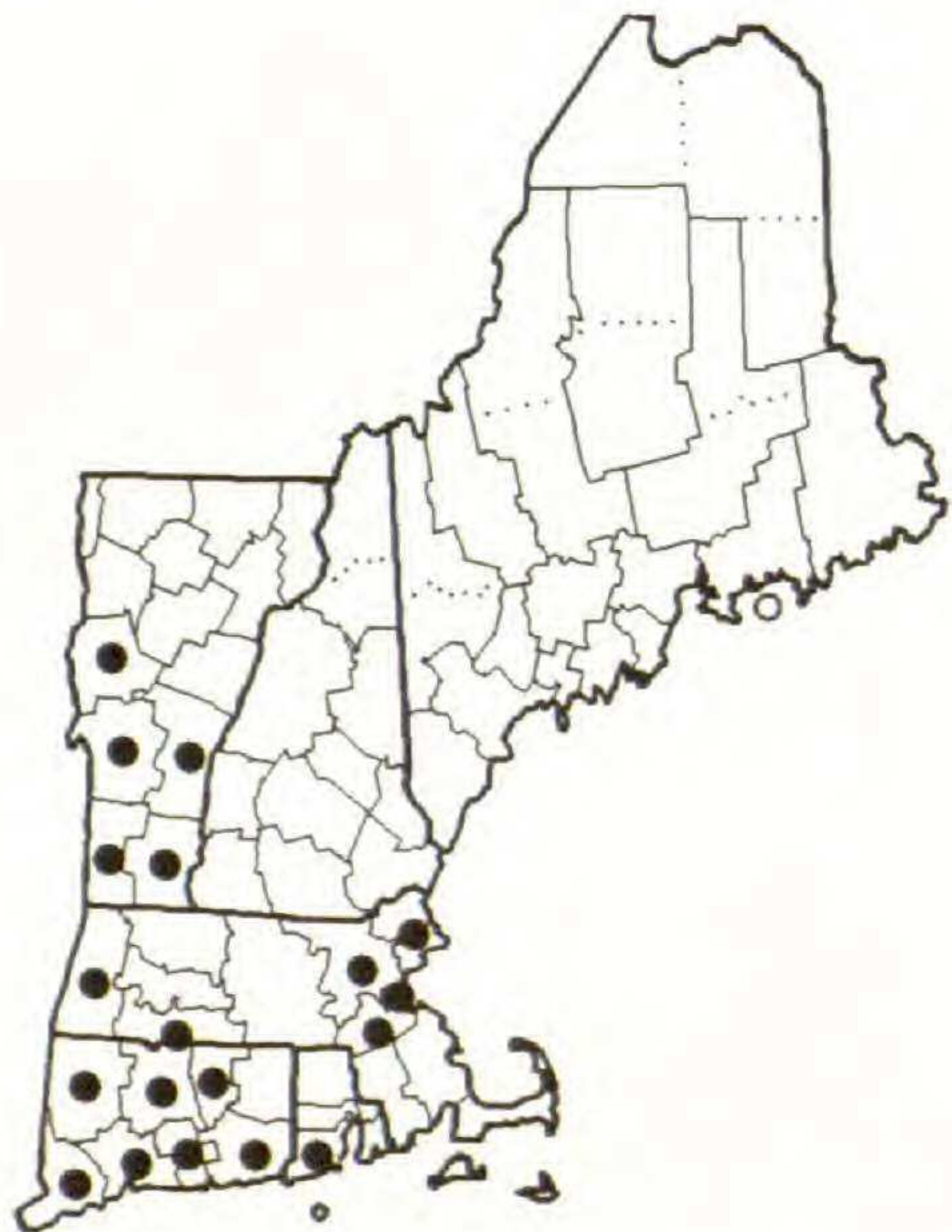
*Elymus riparius**Elymus submuticus**Elymus trachycaulus*
subsp. *trachycaulus**Elymus villosus*

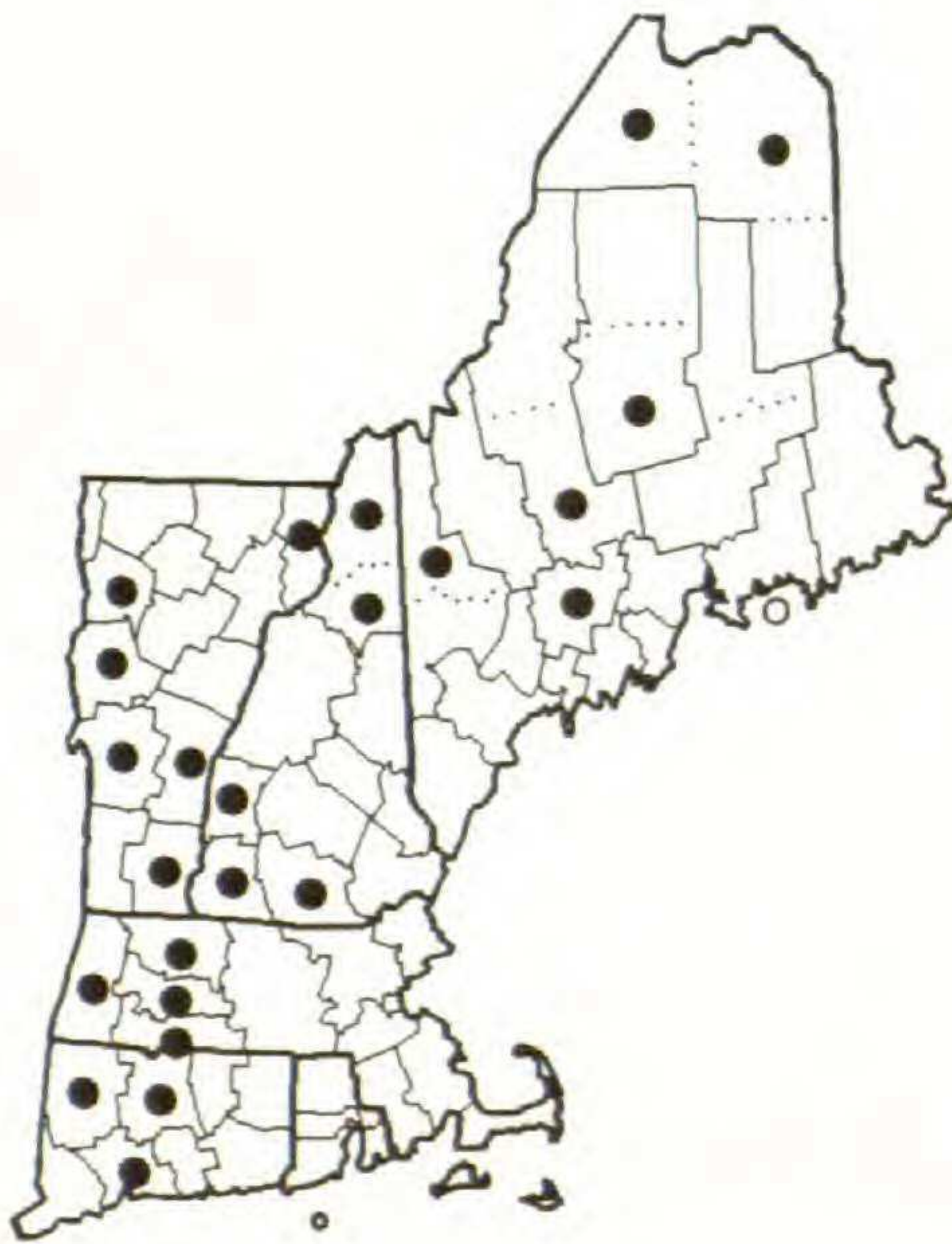
Figure 33. Distribution maps for *Elymus riparius*, *E. submuticus*, *E. trachycaulus* subsp. *trachycaulus* and *E. villosus*.



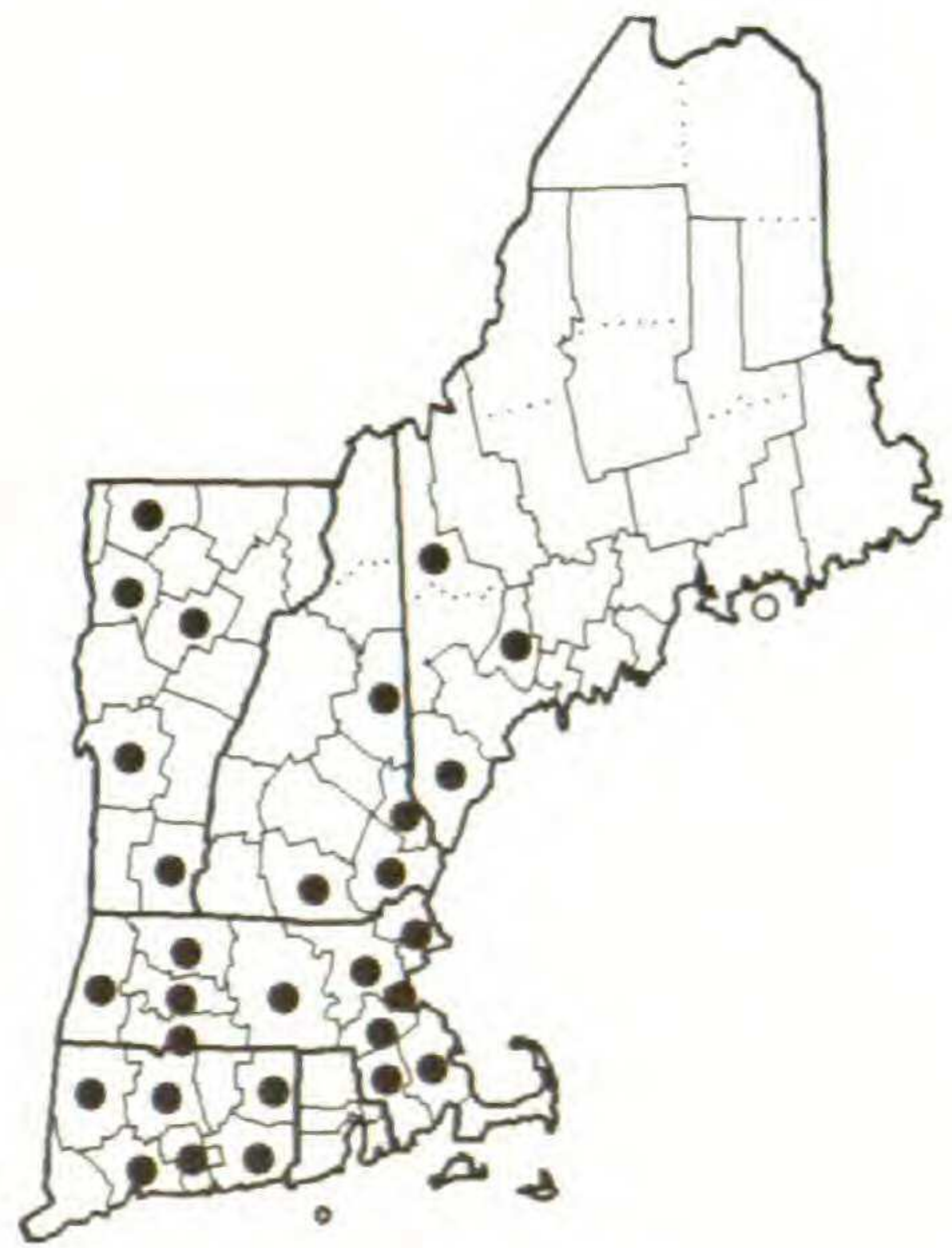
Elymus virginicus var. *virginicus*



Elymus virginicus var. *halophilus*

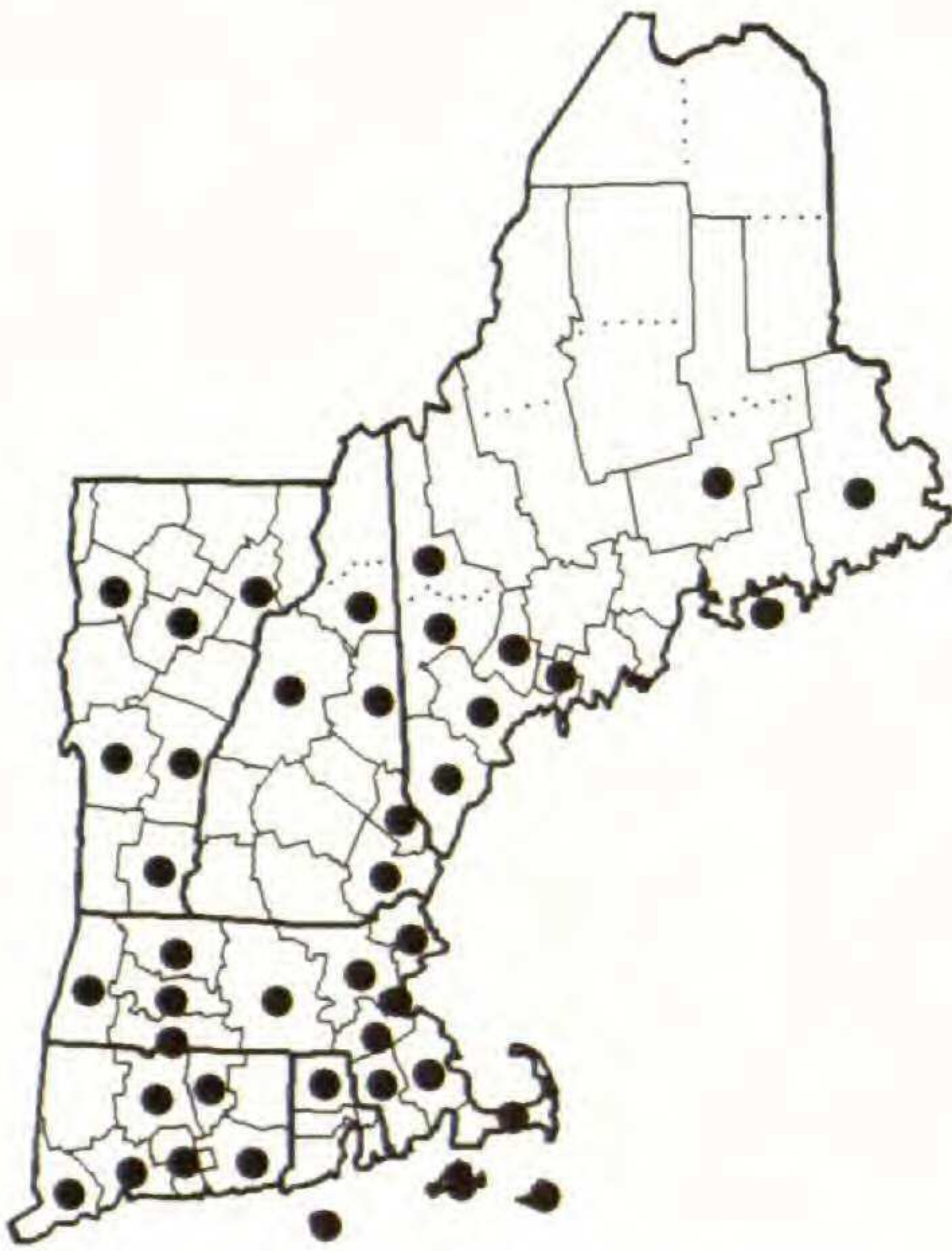


Elymus wiegandii



Eragrostis capillaris

Figure 34. Distribution maps for *Elymus virginicus* var. *virginicus*, *E. virginicus* var. *halophilus*, *E. wiegandii* and *Eragrostis capillaris*.



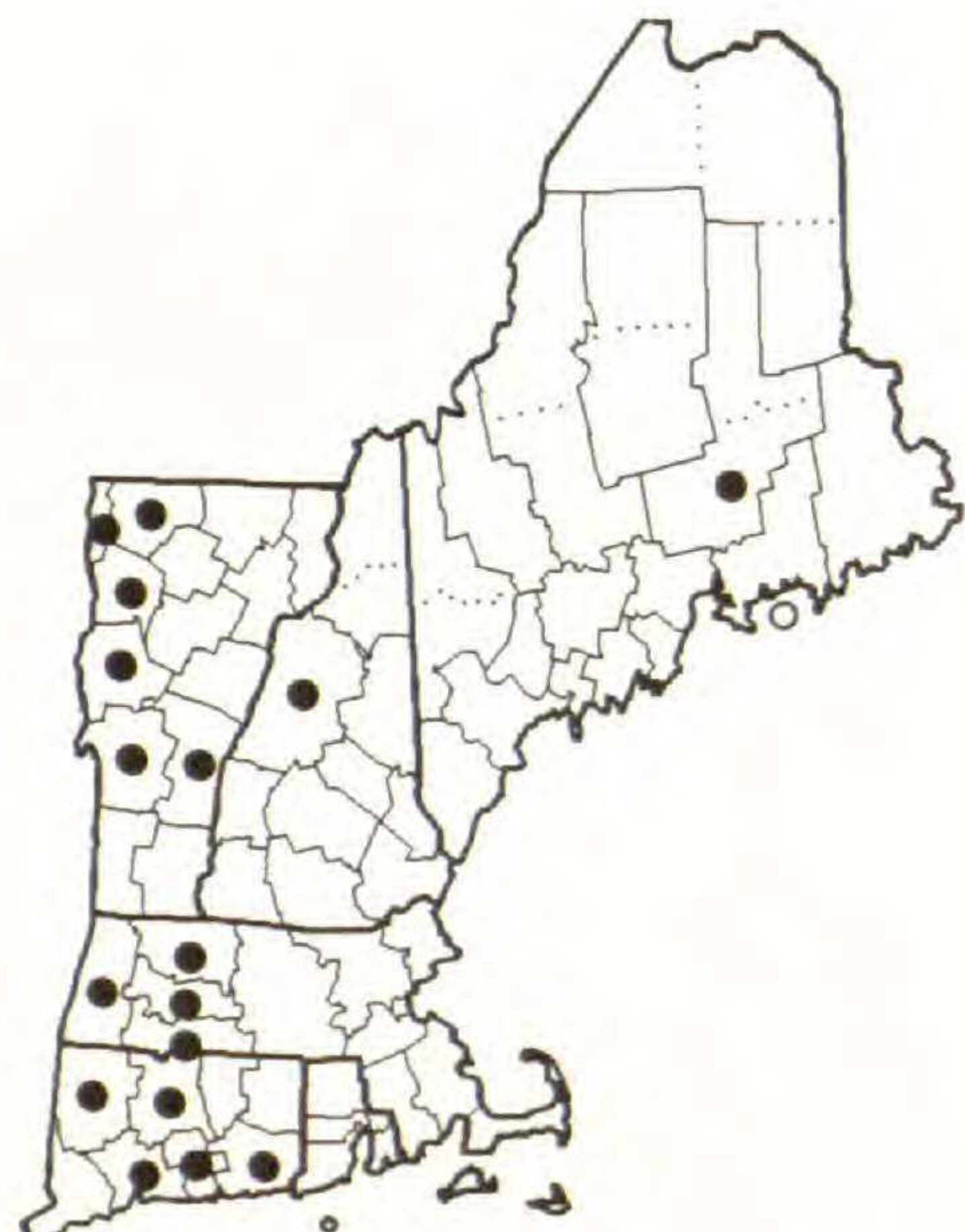
ERAGROSTIS CILIANENSIS



ERAGROSTIS CURVULA



Eragrostis frankii



Eragrostis hypnoides

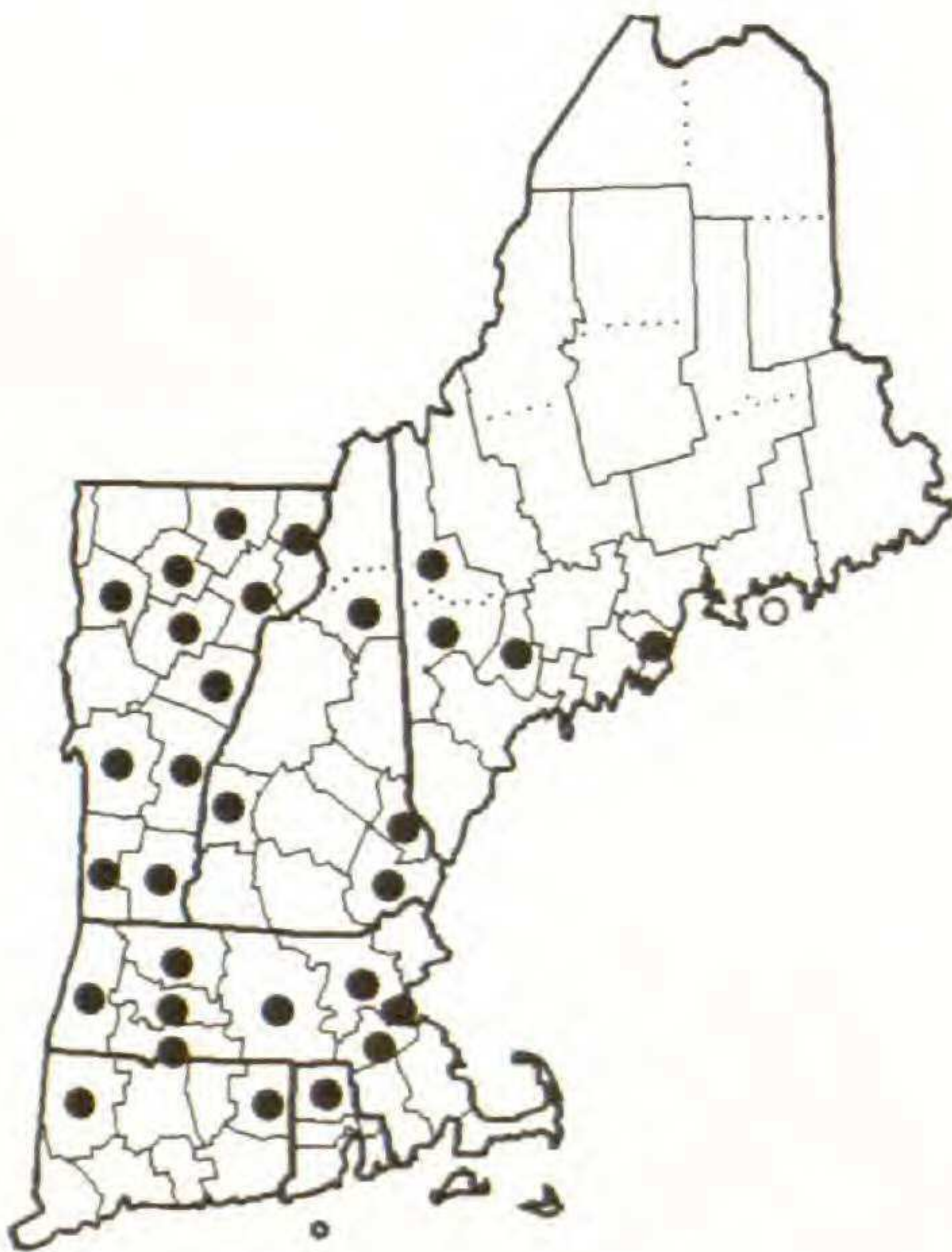
Figure 35. Distribution maps for *ERAGROSTIS CILIANENSIS*, *E. CURVULA*, *E. frankii* and *E. hypnoides*.



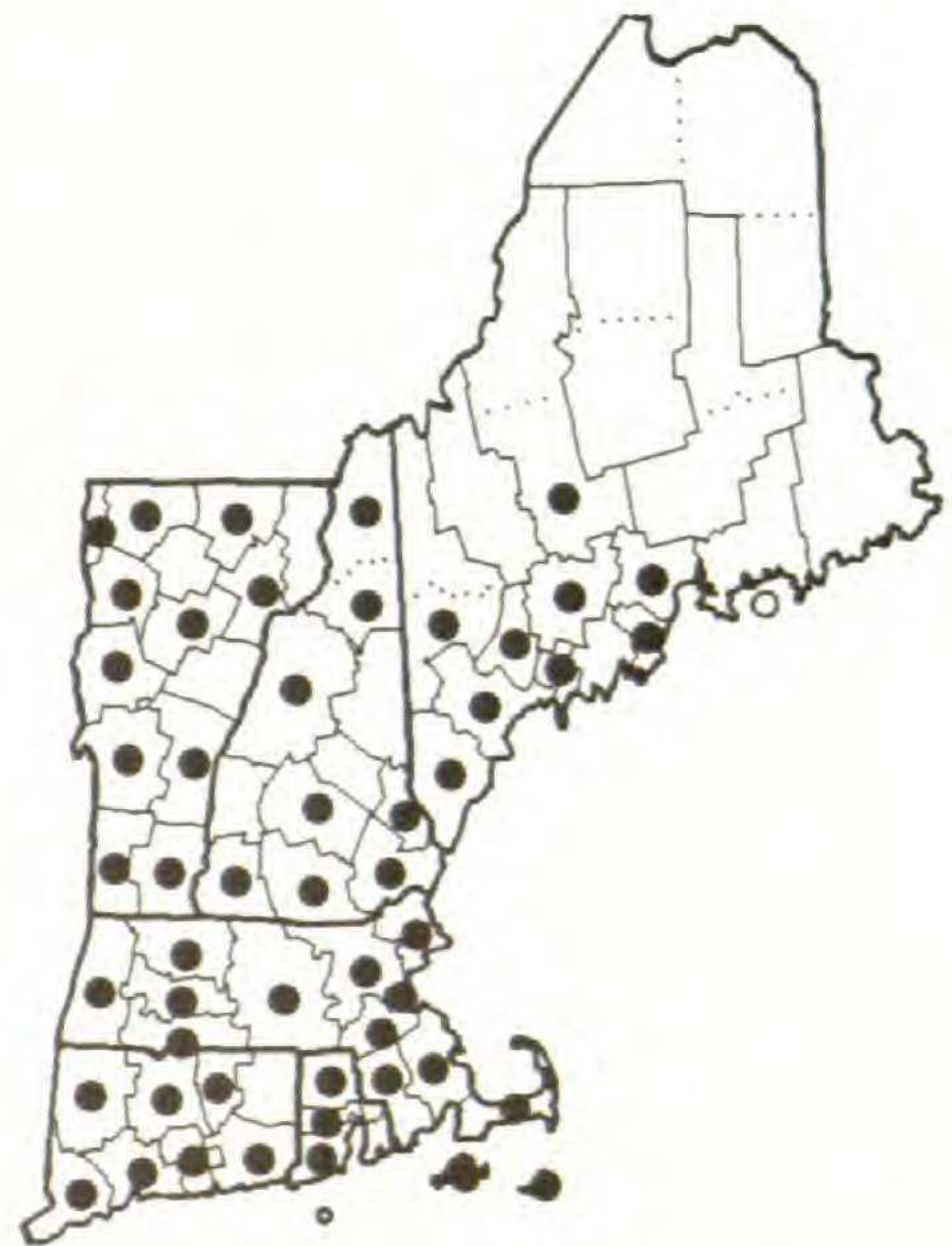
ERAGROSTIS INTERMEDIA



ERAGROSTIS MEXICANA
subsp. *VIRESCENS*

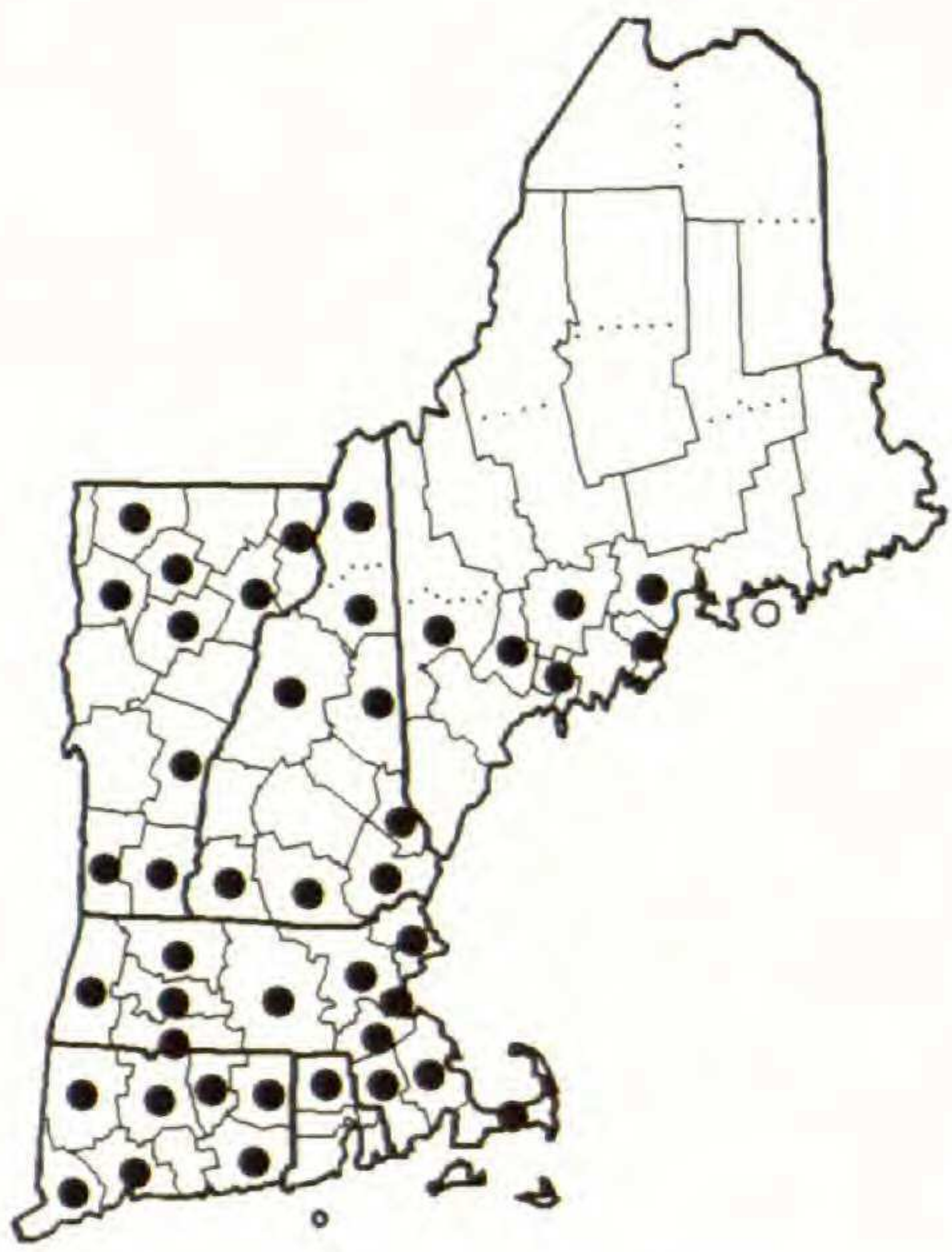


ERAGROSTIS MINOR

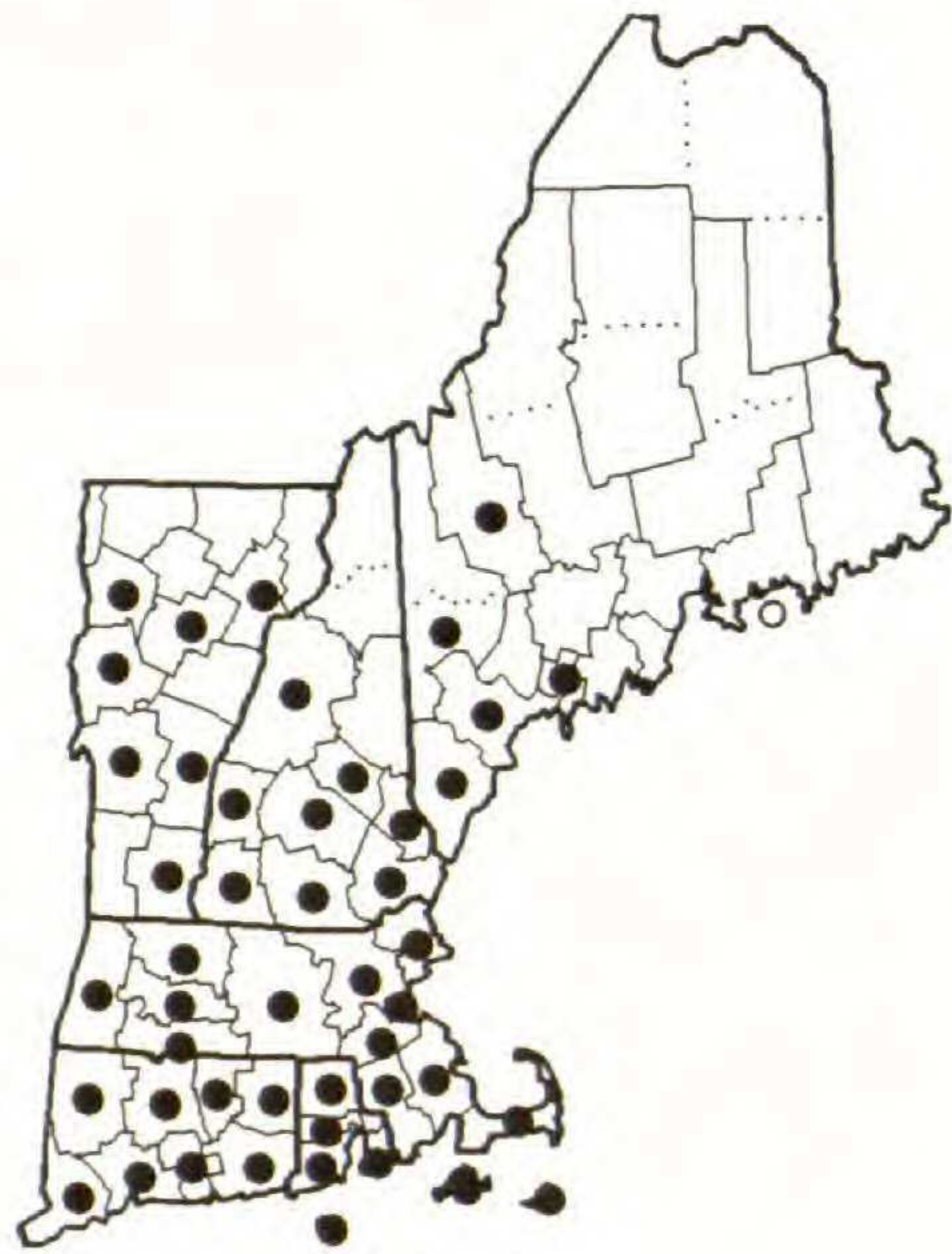


Eragrostis pectinacea

Figure 36. Distribution maps for *ERAGROSTIS INTERMEDIA*, *E. MEXICANA* subsp. *VIRESCENS*, *E. MINOR* and *E. pectinacea*.



ERAGROSTIS PILOSA



Eragrostis spectabilis

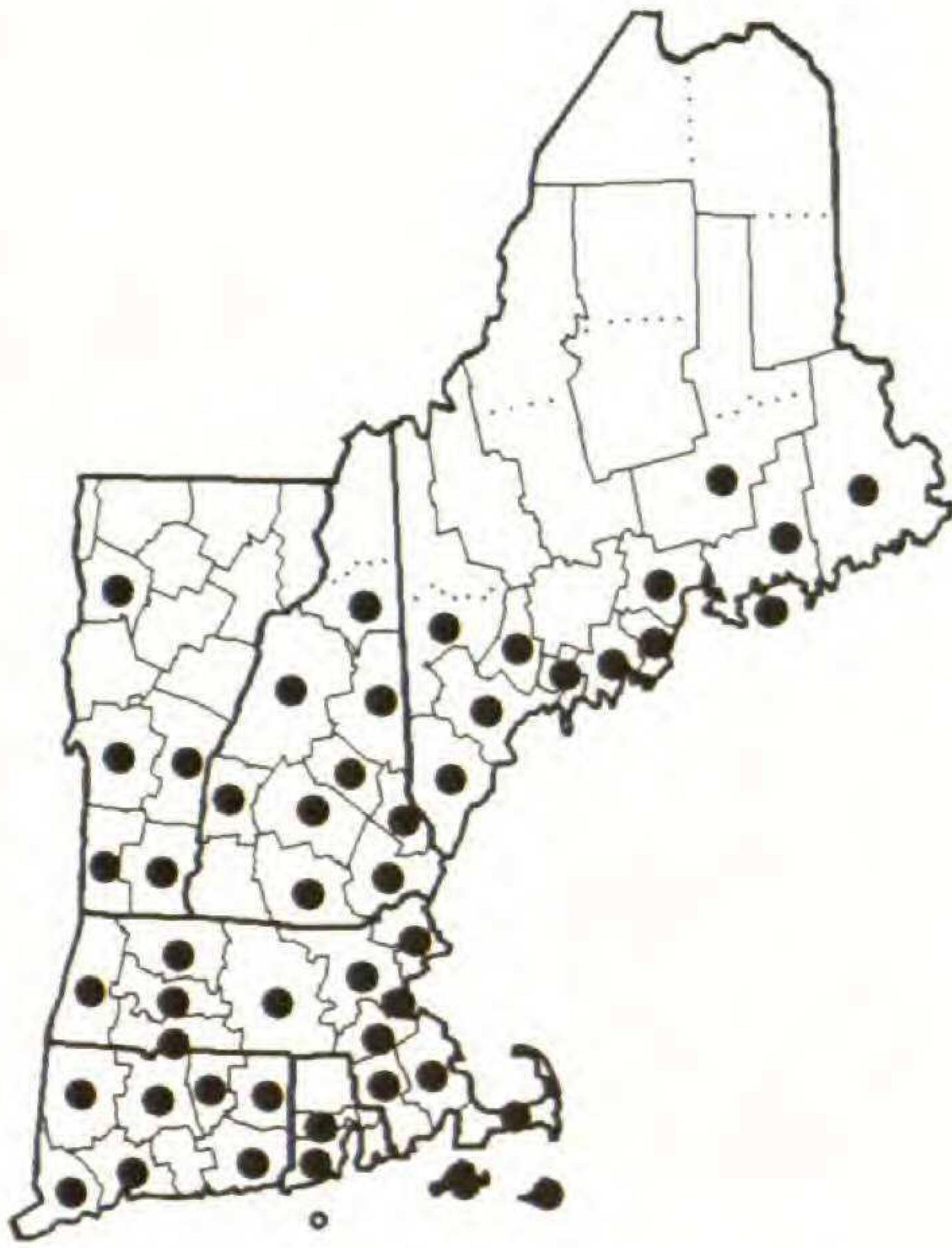


EREMOCHLOA OPHIUROIDES



Festuca brachyphylla

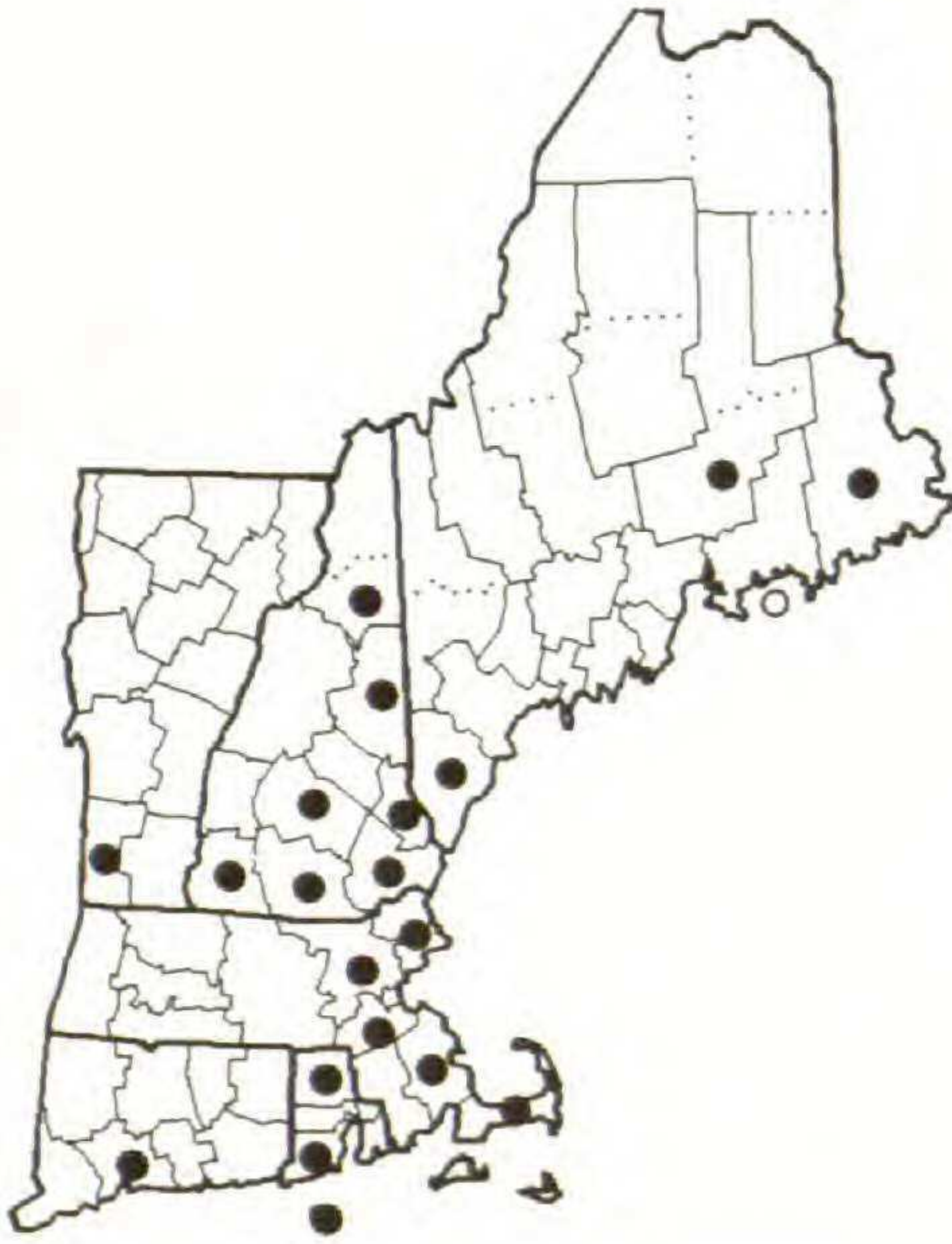
Figure 37. Distribution maps for *ERAGROSTIS PILOSA*, *E. spectabilis*, *EREMOCHLOA OPHIUROIDES* and *Festuca brachyphylla*.



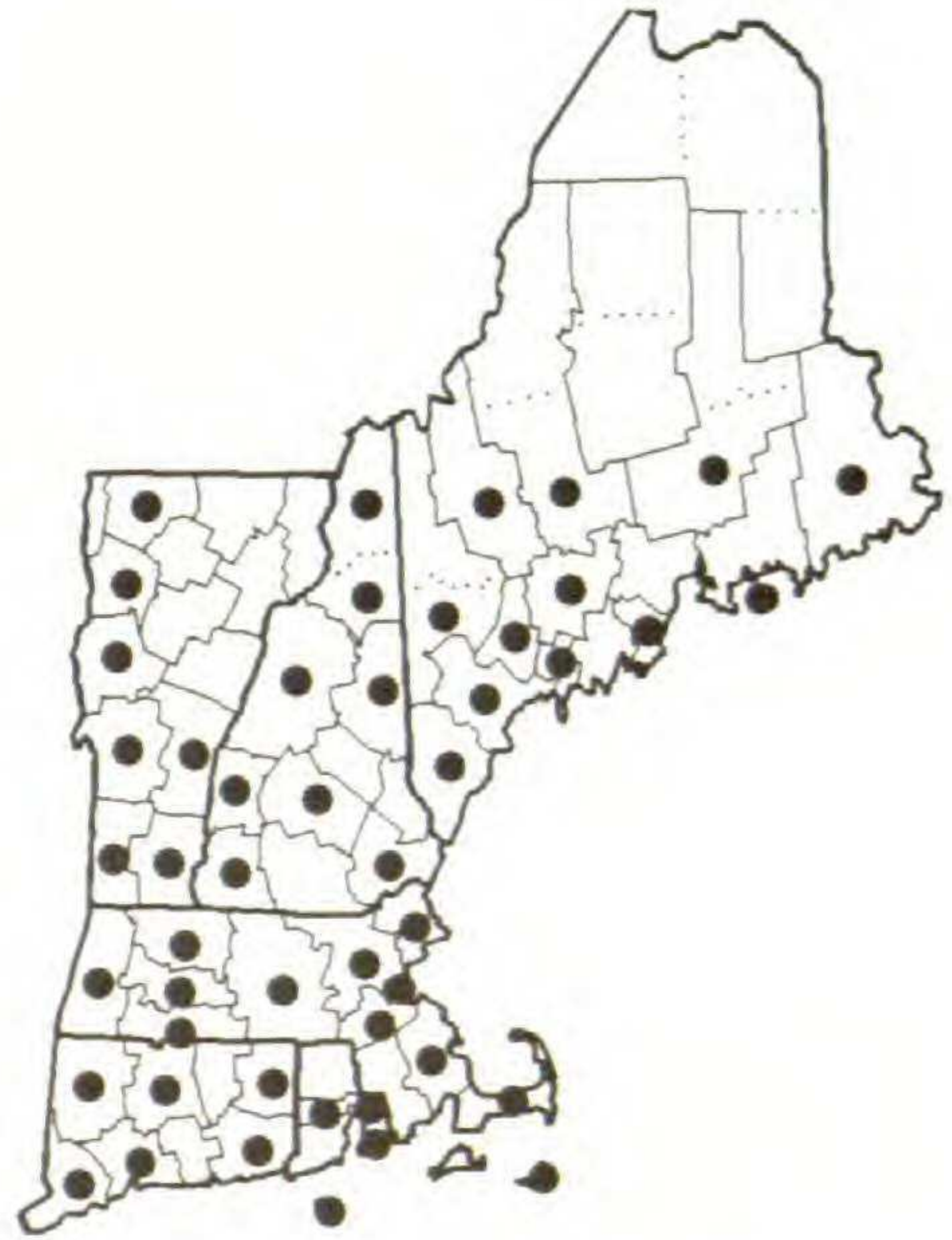
FESTUCA FILIFORMIS



FESTUCA HETEROMALLA



FESTUCA NIGRESCENS

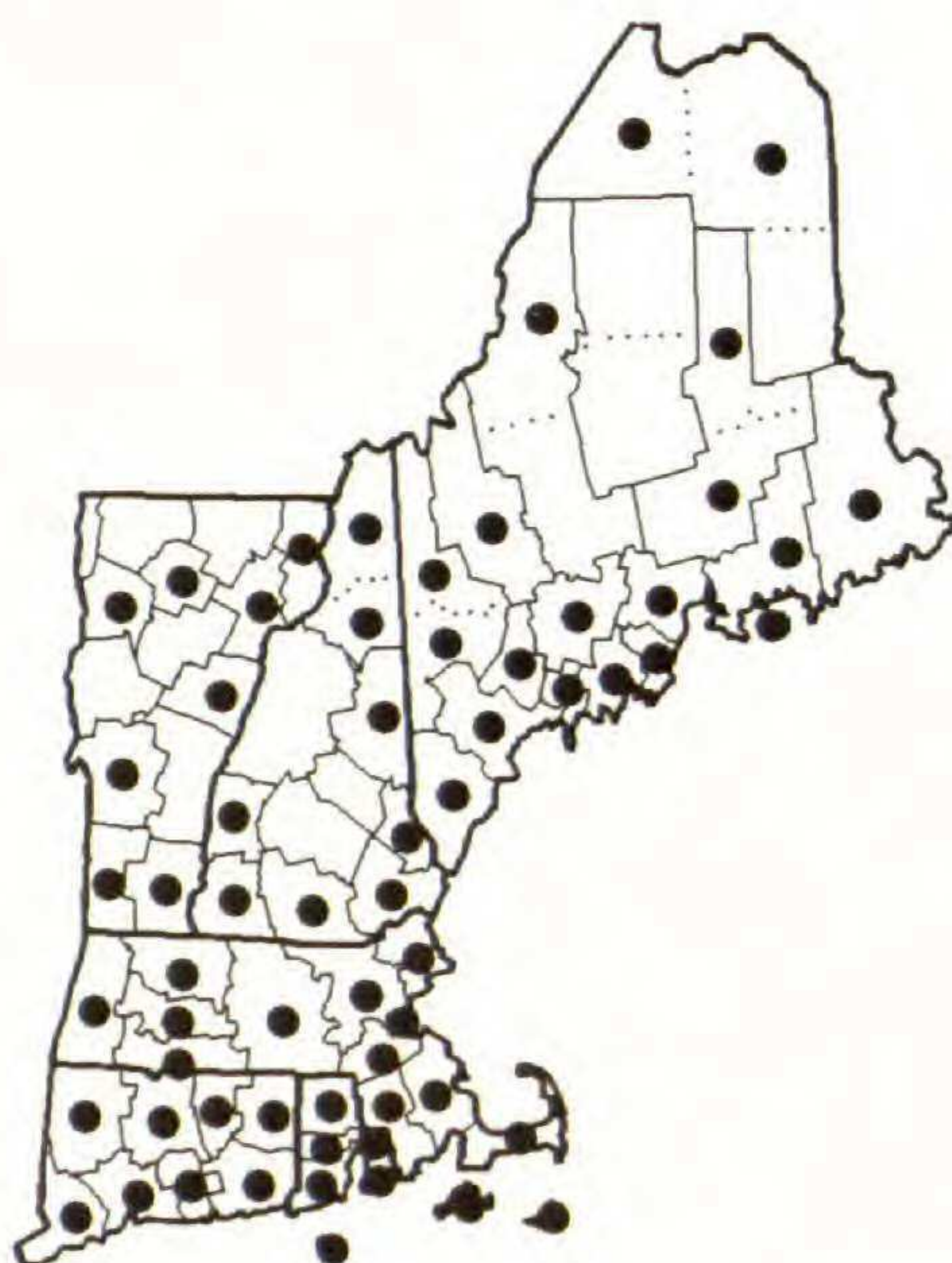


FESTUCA OVINA

Figure 38. Distribution maps for *FESTUCA FILIFORMIS*, *F. HETEROMALLA*, *F. NIGRESCENS* and *F. OVINA*.



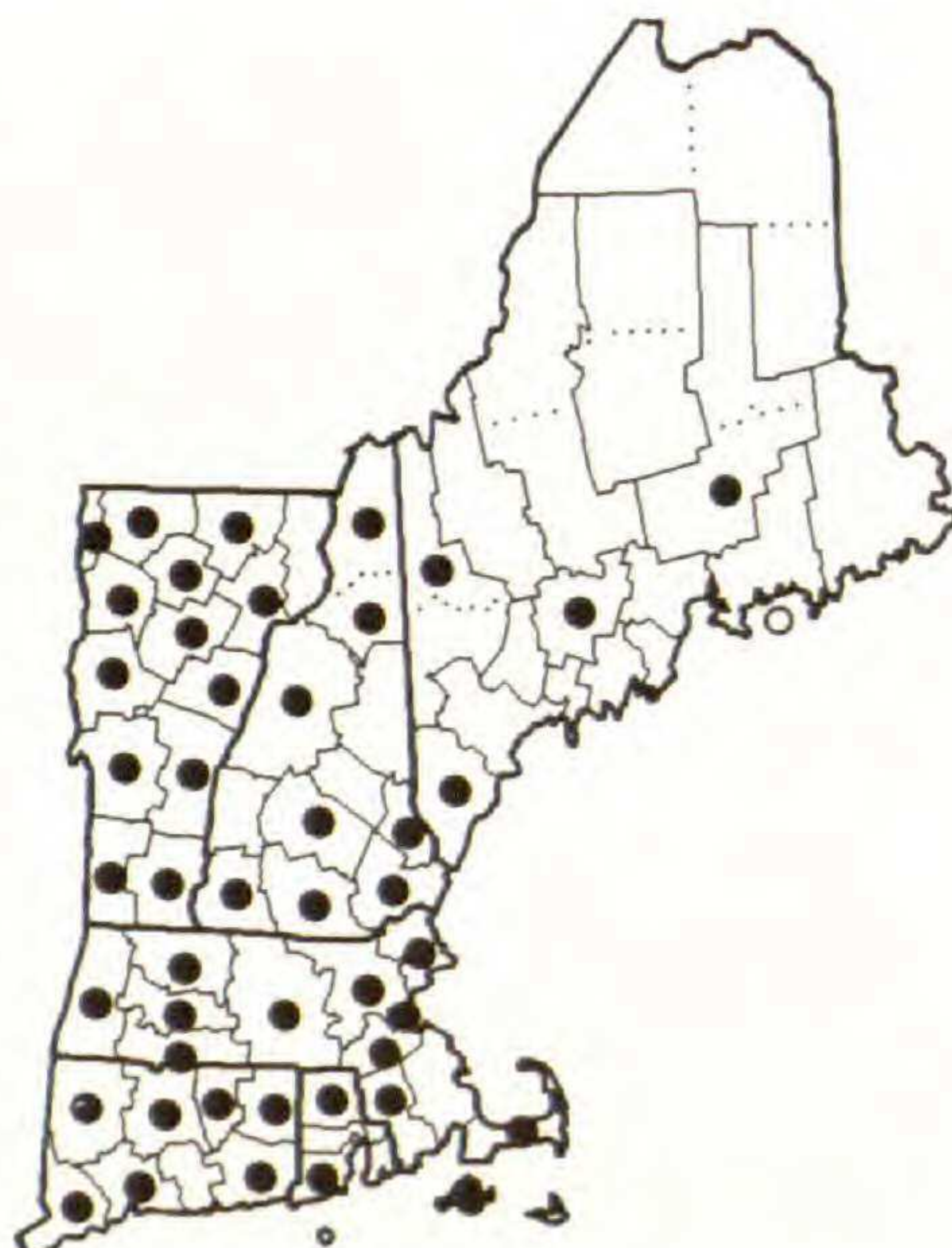
Festuca prolifera



FESTUCA RUBRA
subsp. **RUBRA**

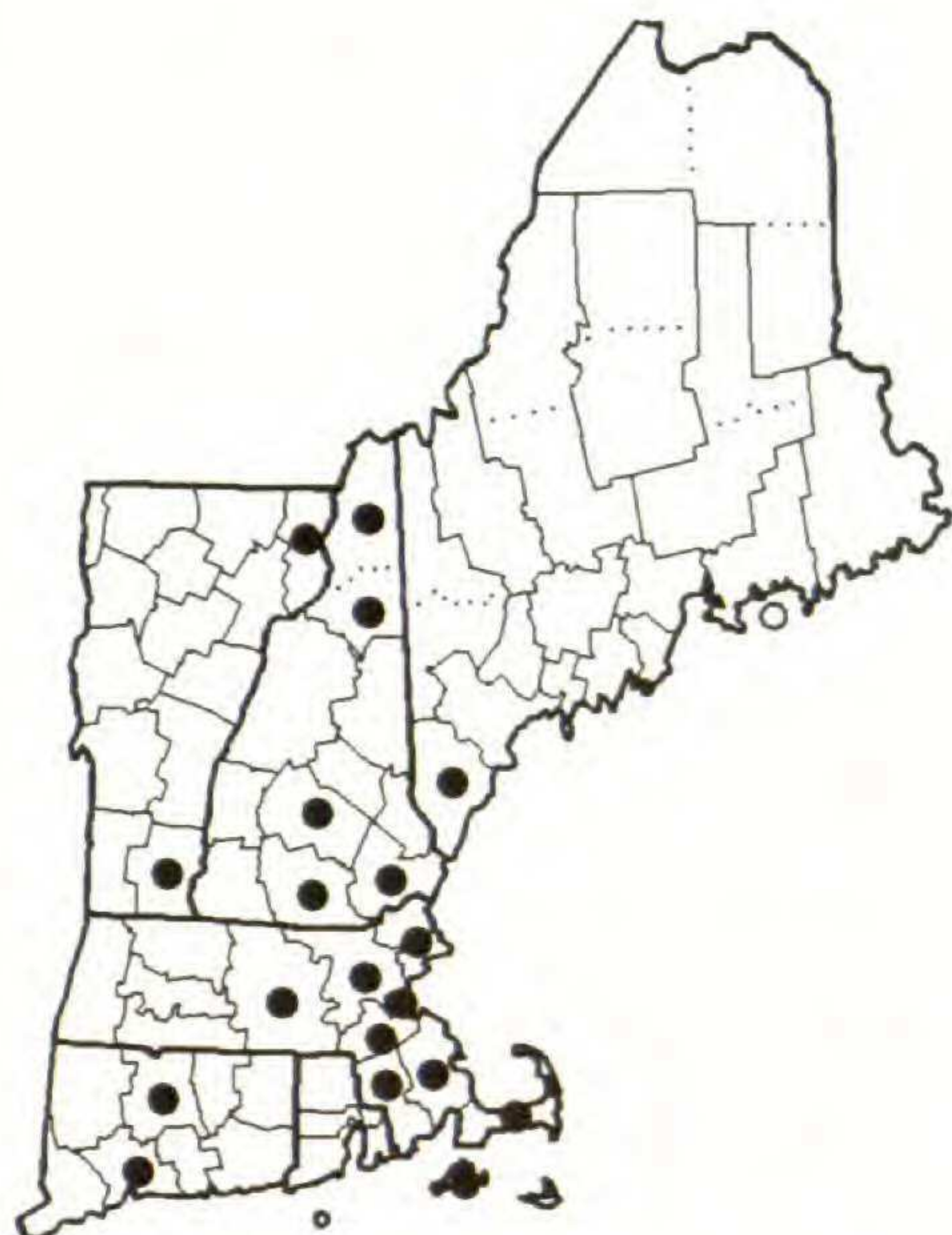


Festuca saximontana



Festuca subverticillata

Figure 39. Distribution maps for *Festuca prolifera*, *F. RUBRA* subsp. *RUBRA*, *F. saximontana* and *F. subverticillata*.



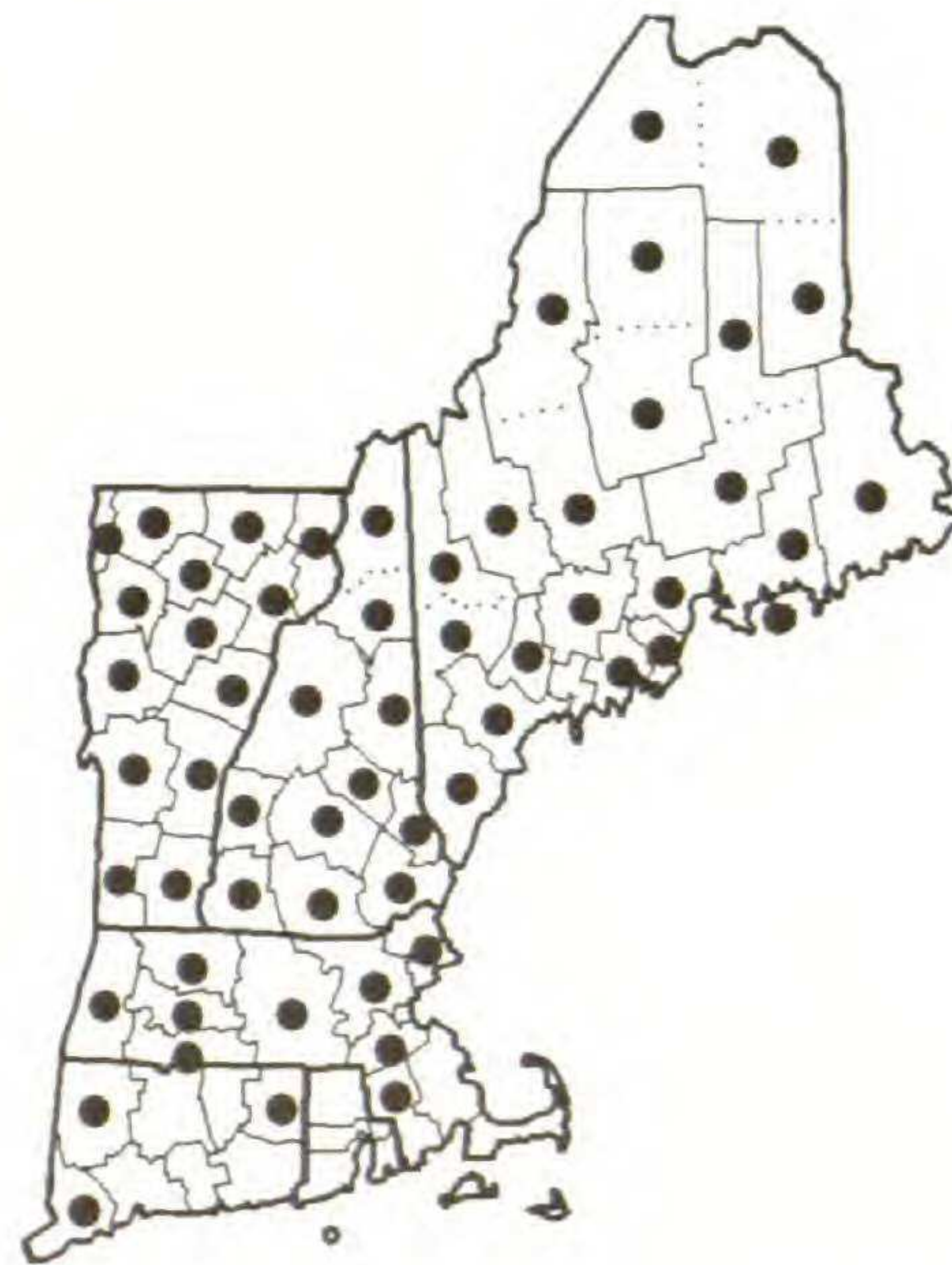
FESTUCA TRACHYPHYLLA



GASTRIDIMUM PHLEOIDES

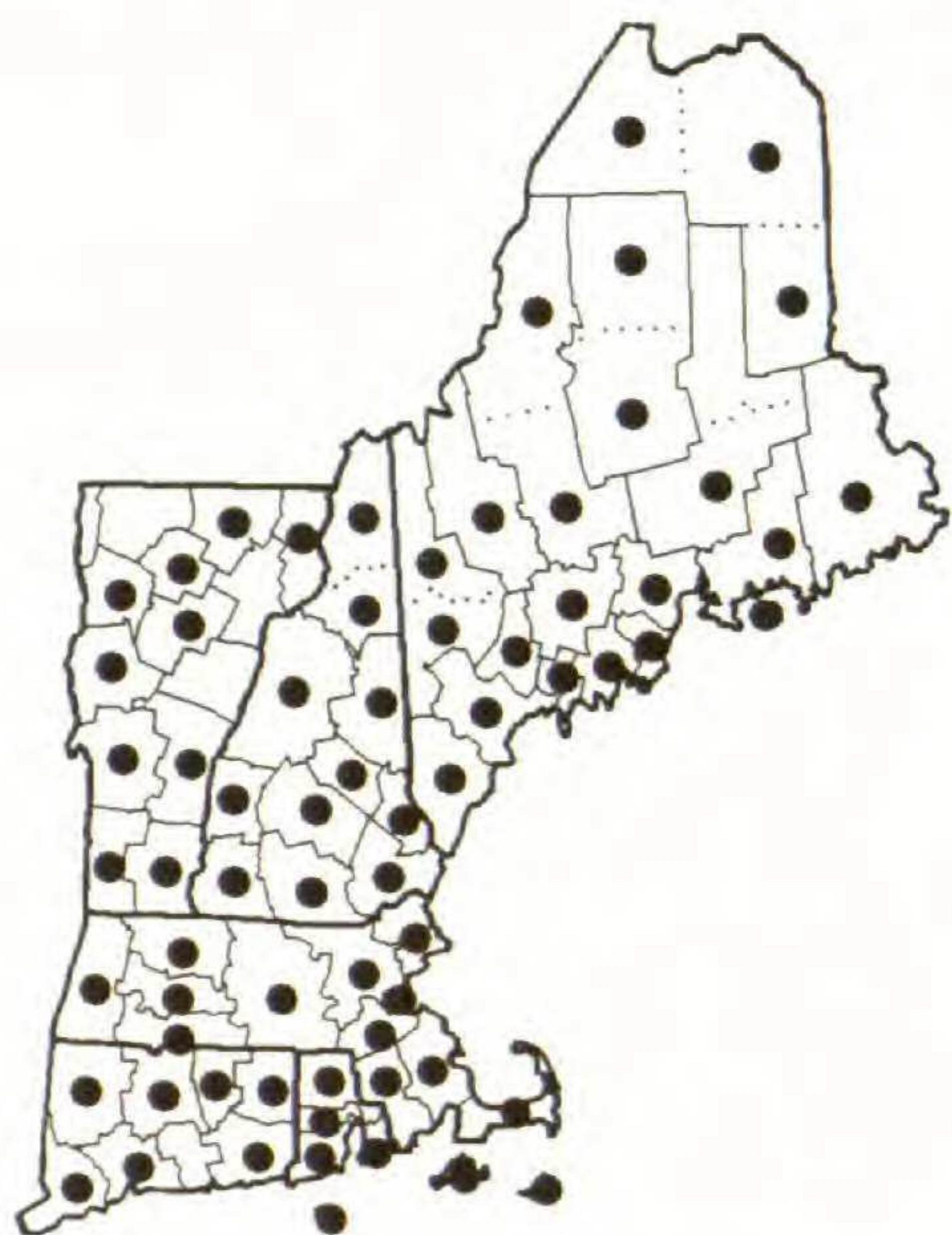


Glyceria acutiflora



Glyceria borealis

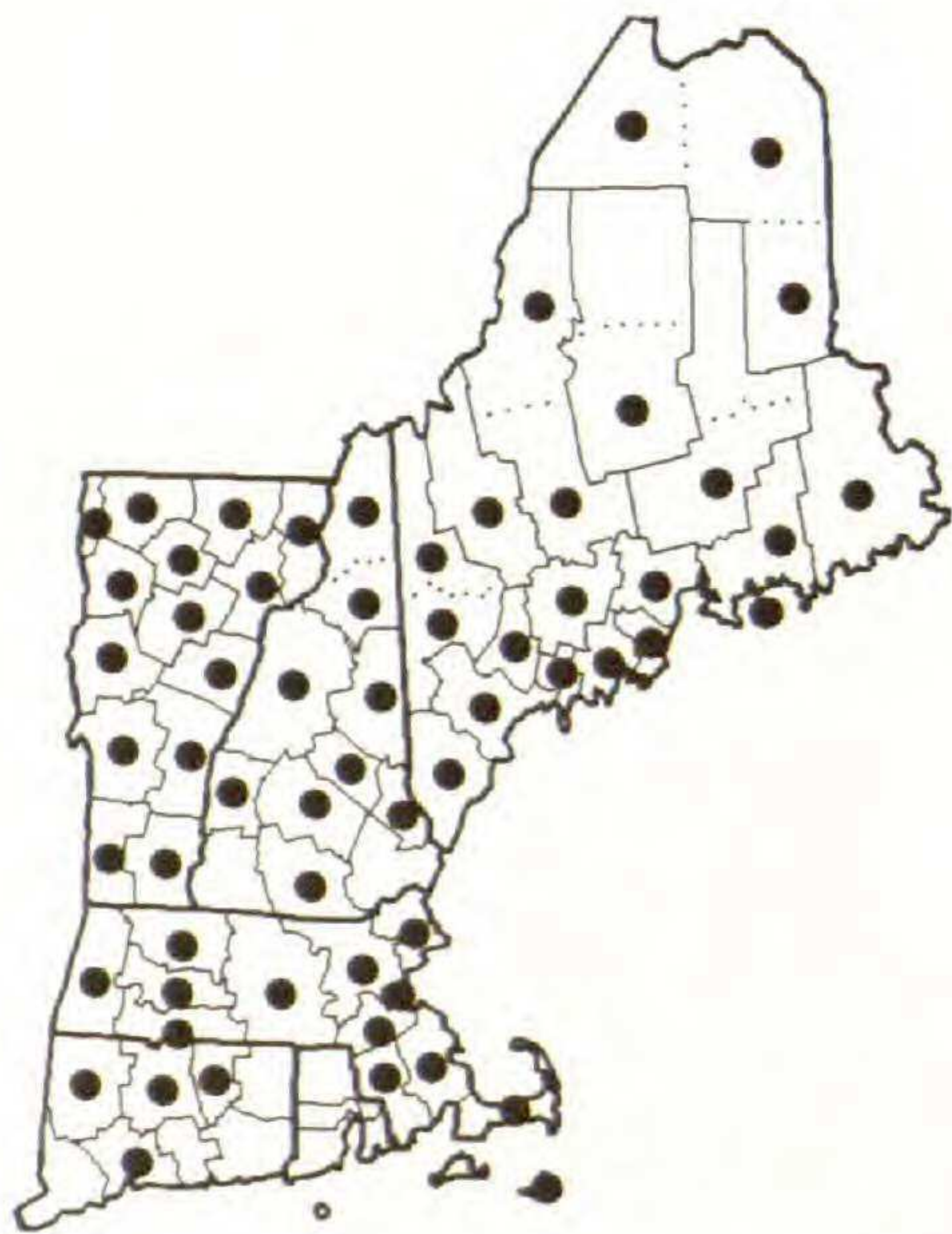
Figure 40. Distribution maps for *FESTUCA TRACHYPHYLLA*, *GASTRIDIMUM PHLEOIDES*, *Glyceria acutiflora* and *G. borealis*.



Glyceria canadensis



Glyceria fluitans

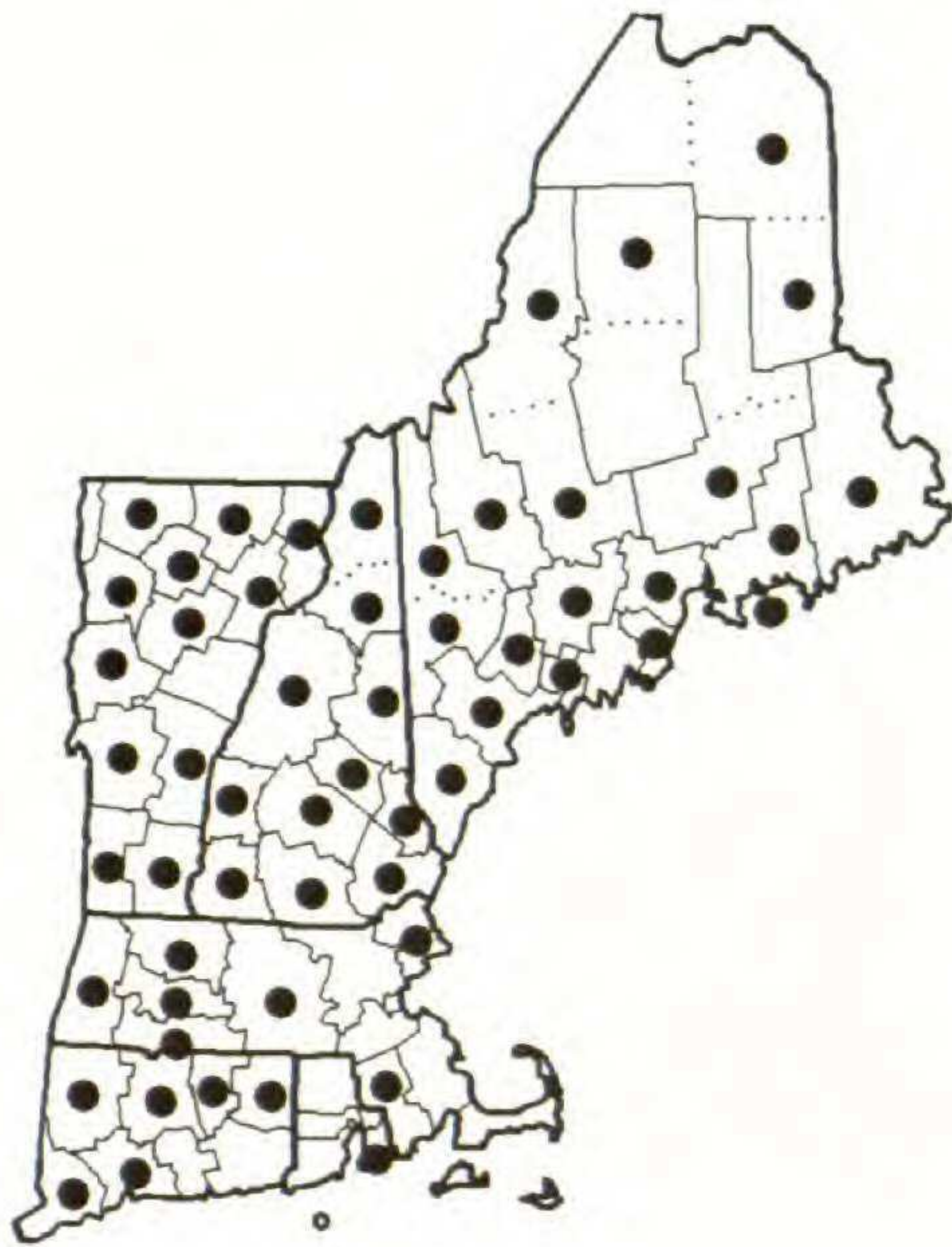


Glyceria grandis

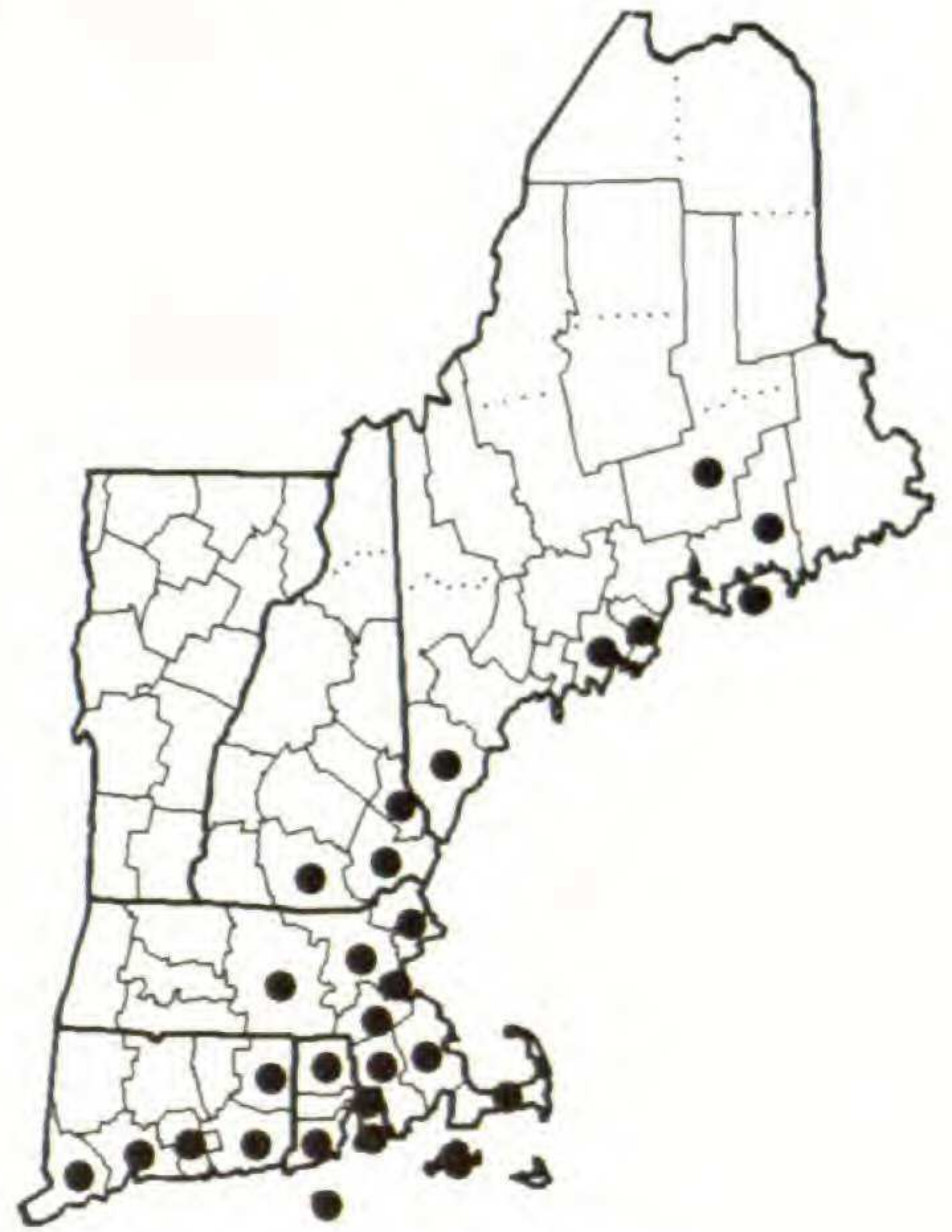


GLYCERIA MAXIMA

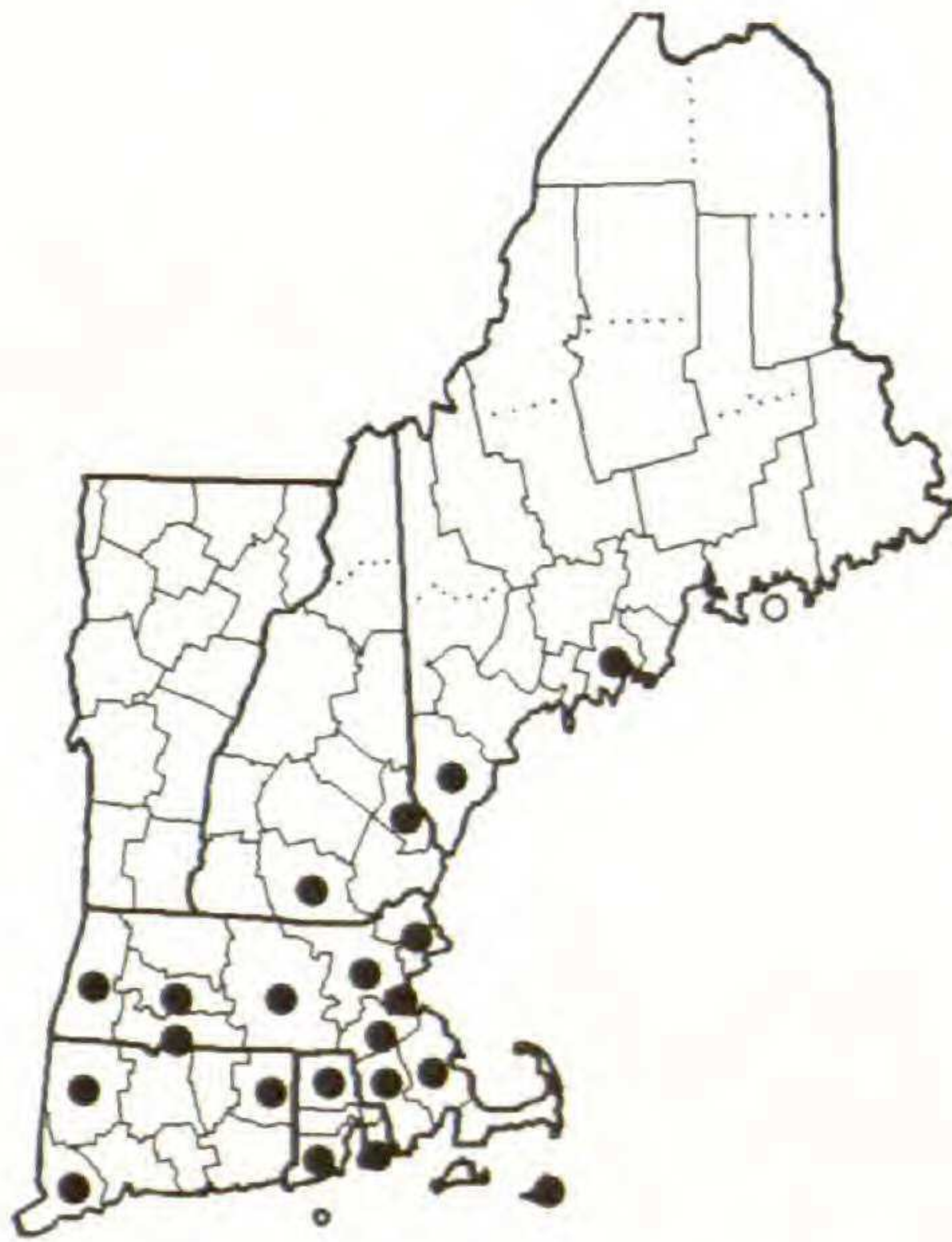
Figure 41. Distribution maps for *Glyceria canadensis*, *G. fluitans*, *G. grandis* and *G. MAXIMA*.



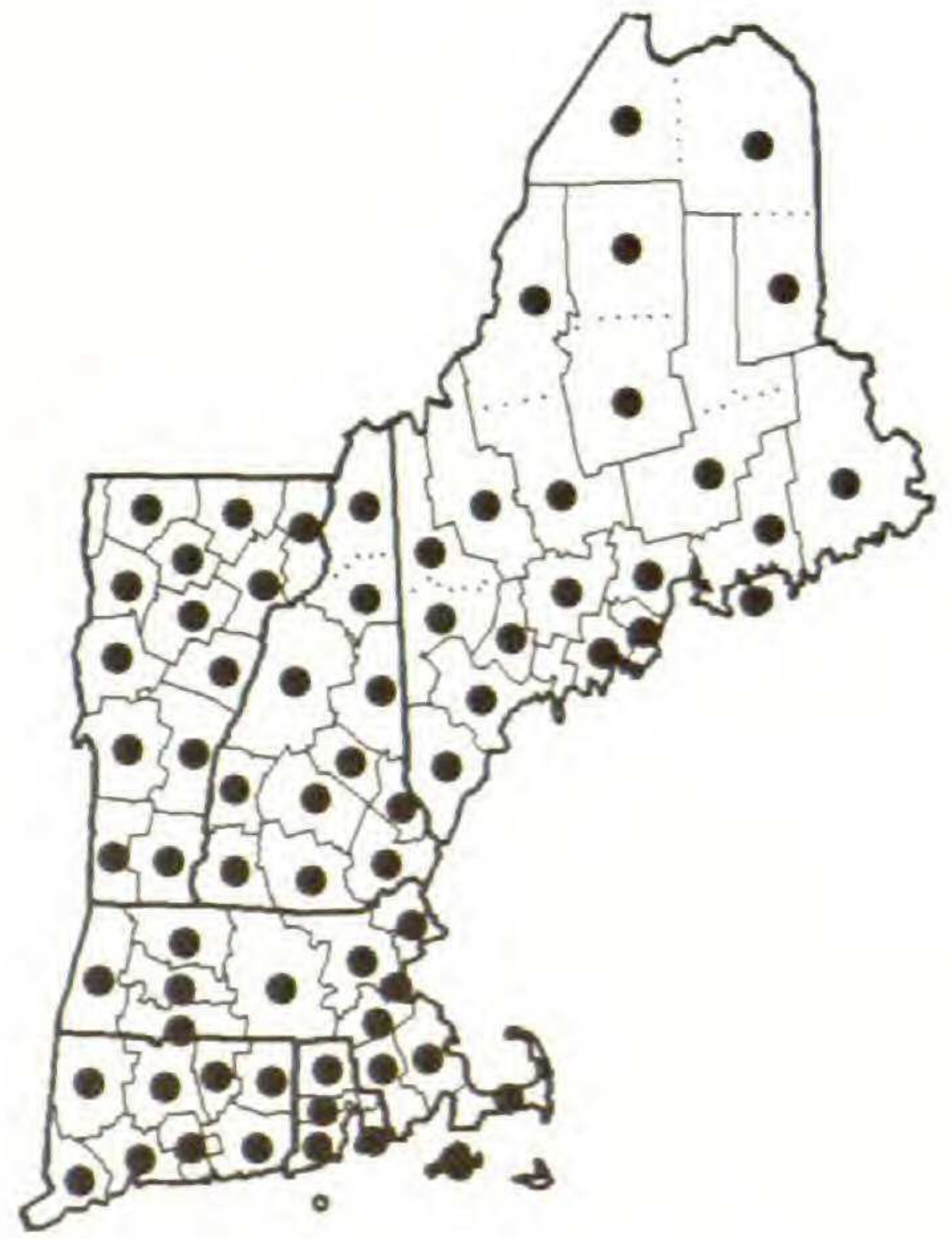
Glyceria melicaria



Glyceria obtusa



Glyceria septentrionalis

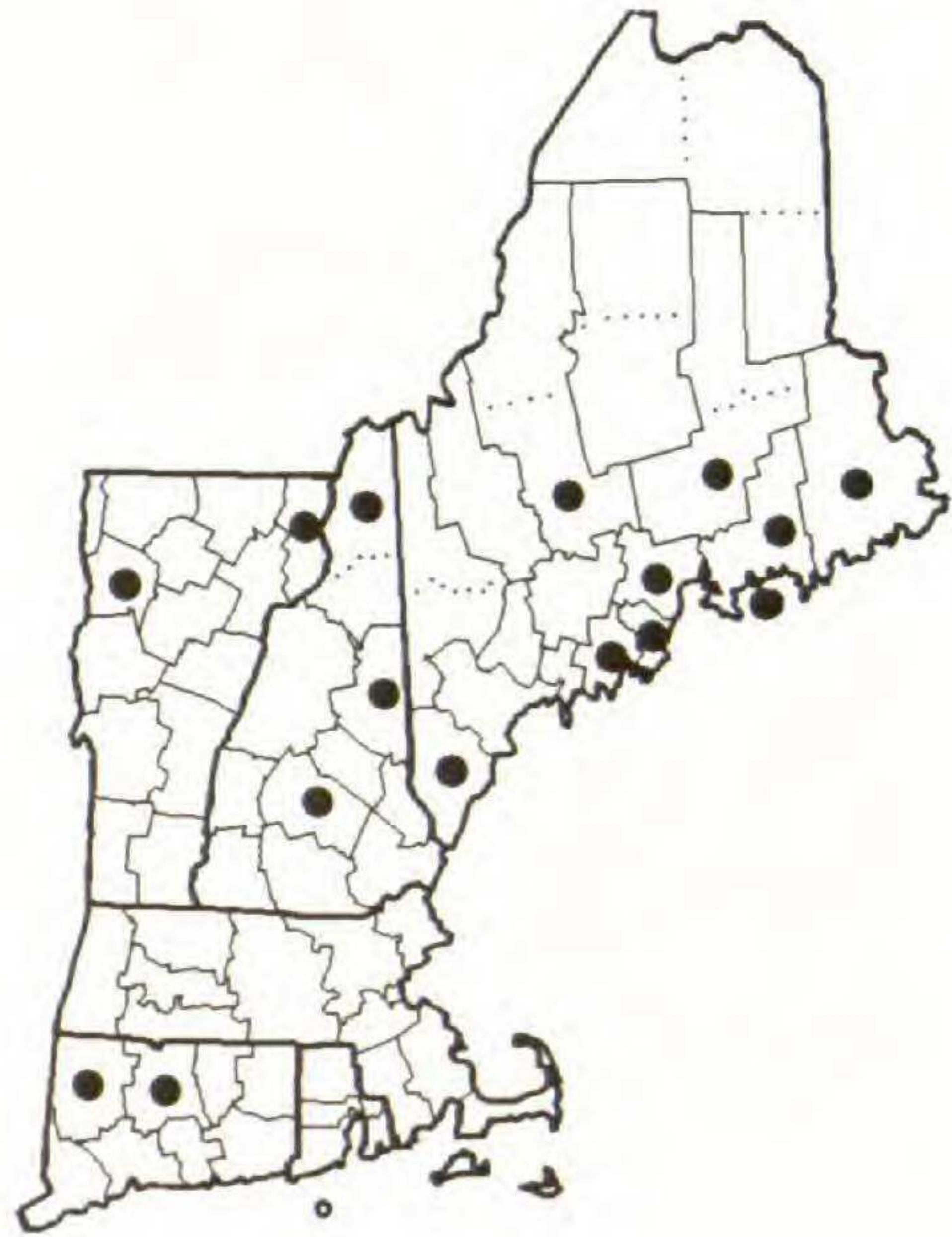


Glyceria striata

Figure 42. Distribution maps for *Glyceria melicaria*, *G. obtusa*, *G. septentrionalis* and *G. striata*.



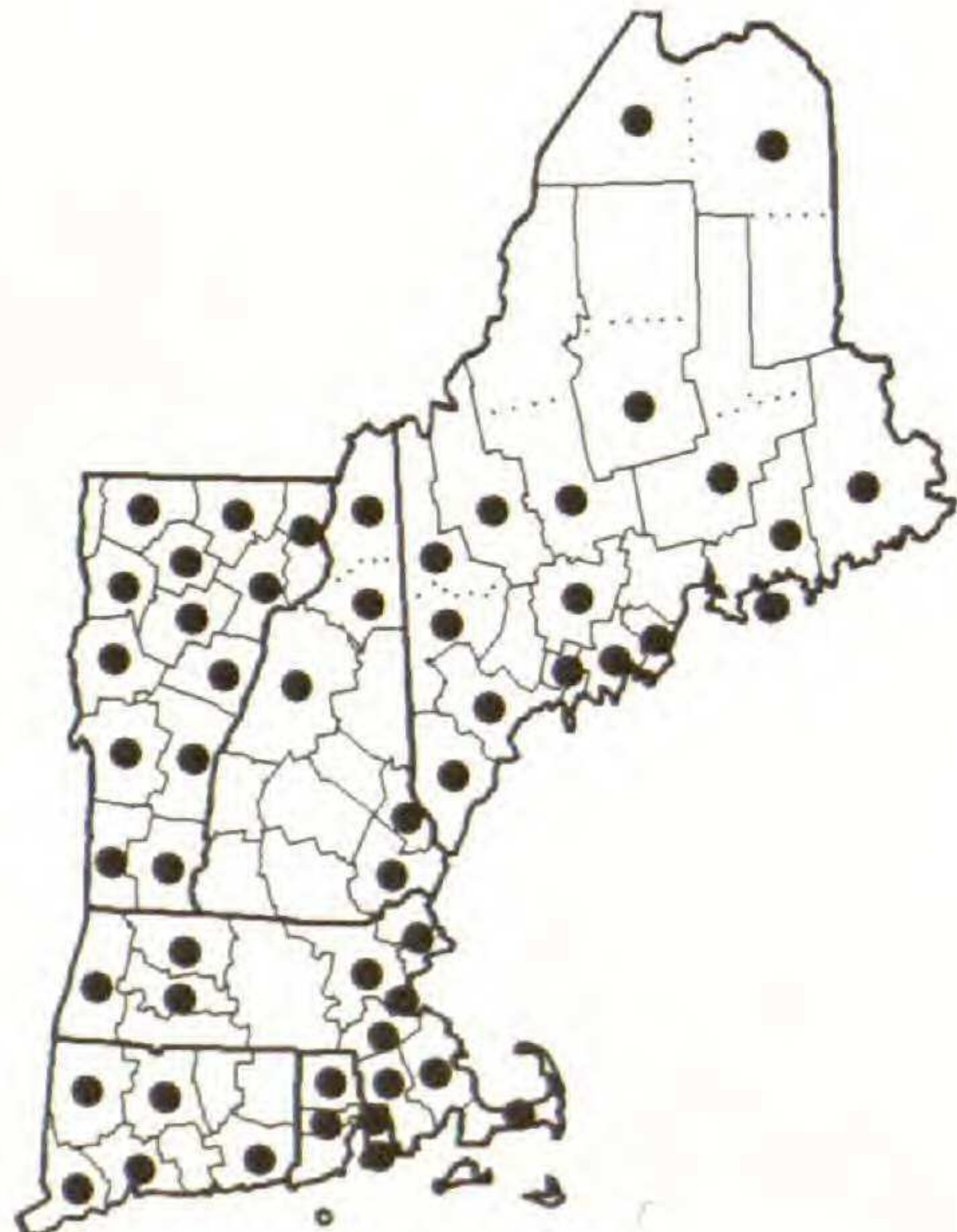
Glyceria acutiflora x *G. septentrionalis*



Glyceria x *laxa*

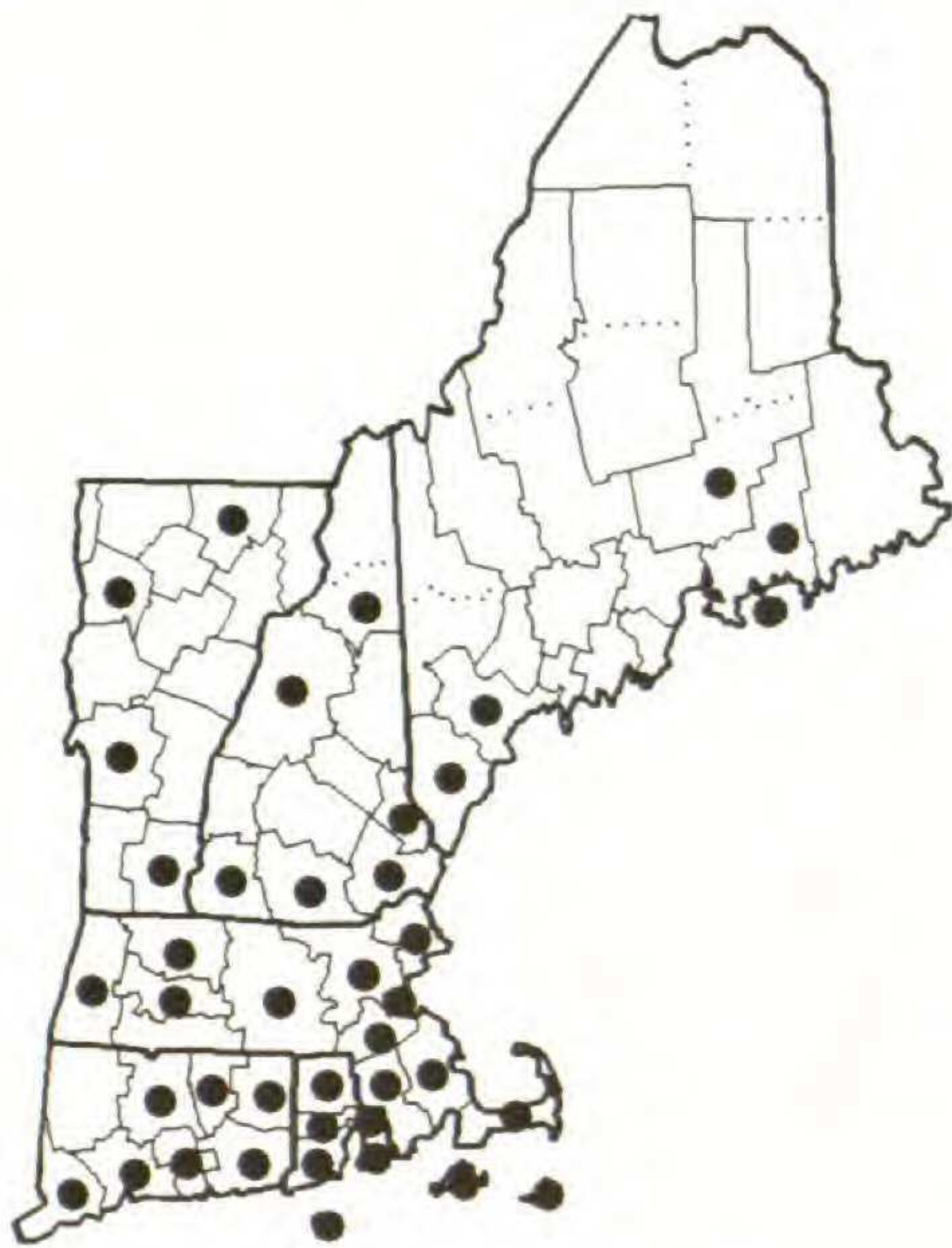


Hierochloë alpina
subsp. *orthantha*



Hierochloë odorata

Figure 43. Distribution maps for *Glyceria acutiflora* x *G. septentrionalis*, *G. x laxa*, *Hierochloë alpina* subsp. *orthantha* and *H. odorata*.



HOLCUS LANATUS



HOLCUS MOLLIS



Hordeum jubatum



HORDEUM MURINUM
subsp. *LEPORINUM*

Figure 44. Distribution maps for *HOLCUS LANATUS*, *H. MOLLIS*, *Hordeum jubatum* and *H. MURINUM* subsp. *LEPORINUM*.

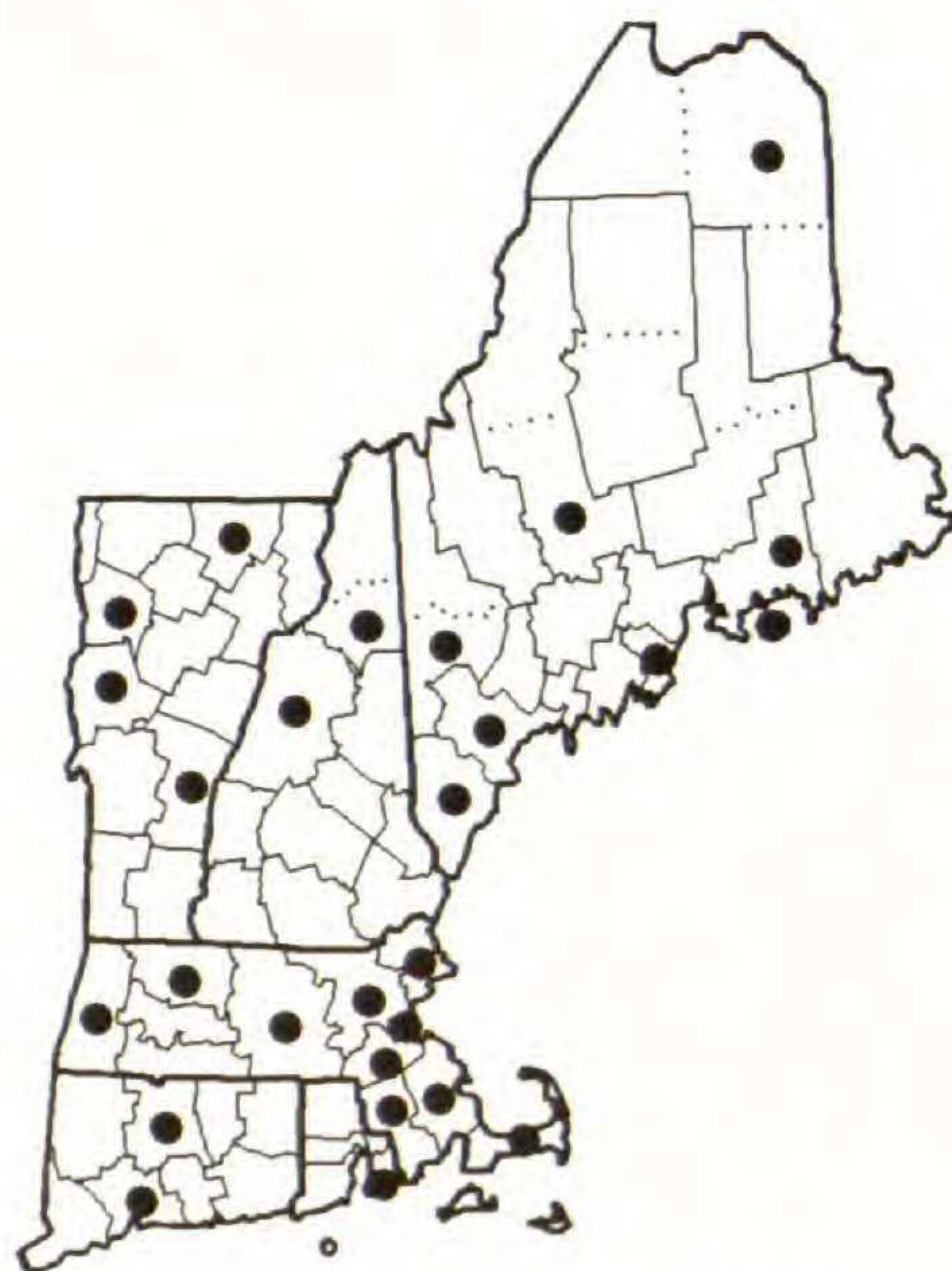
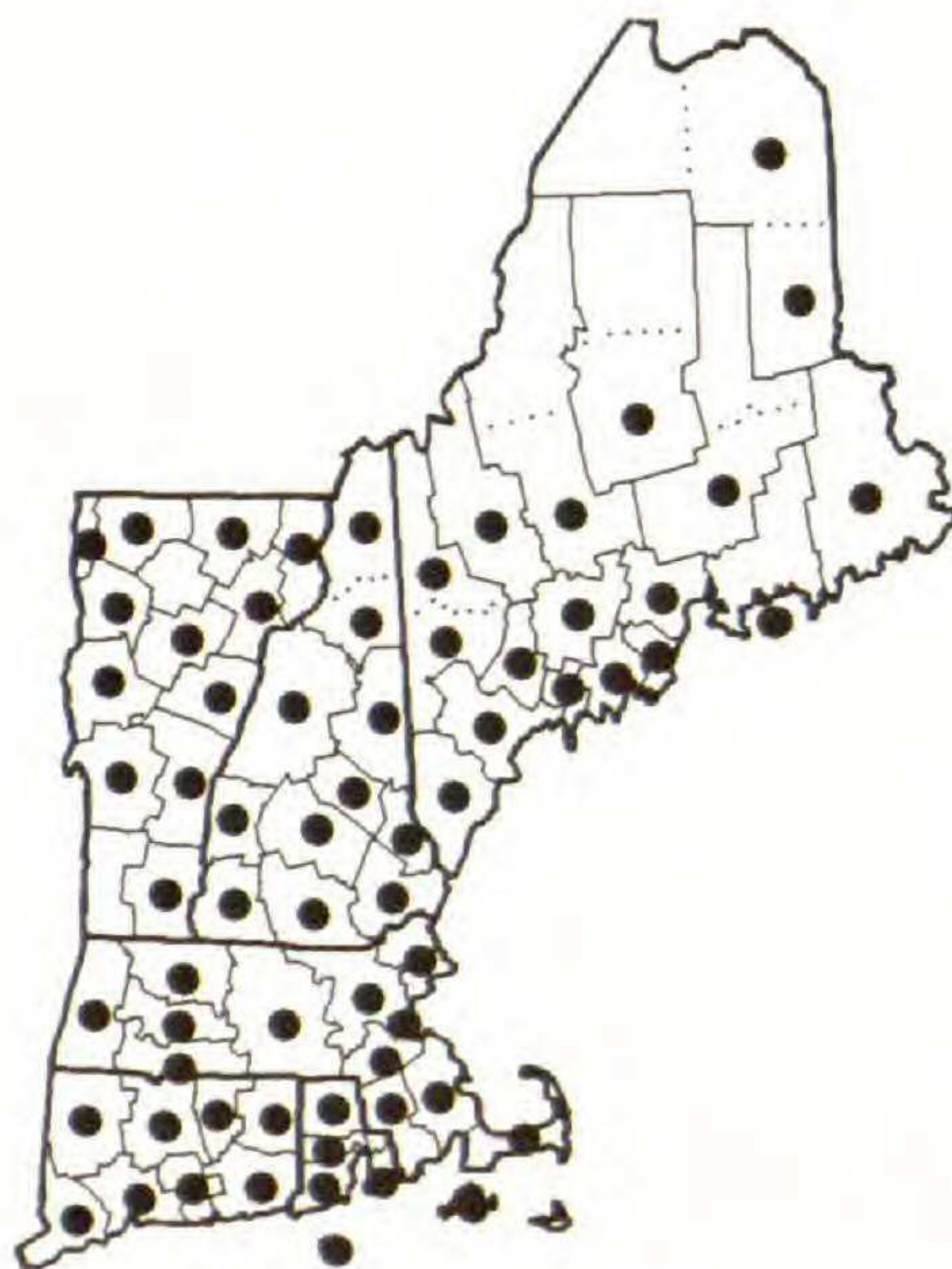
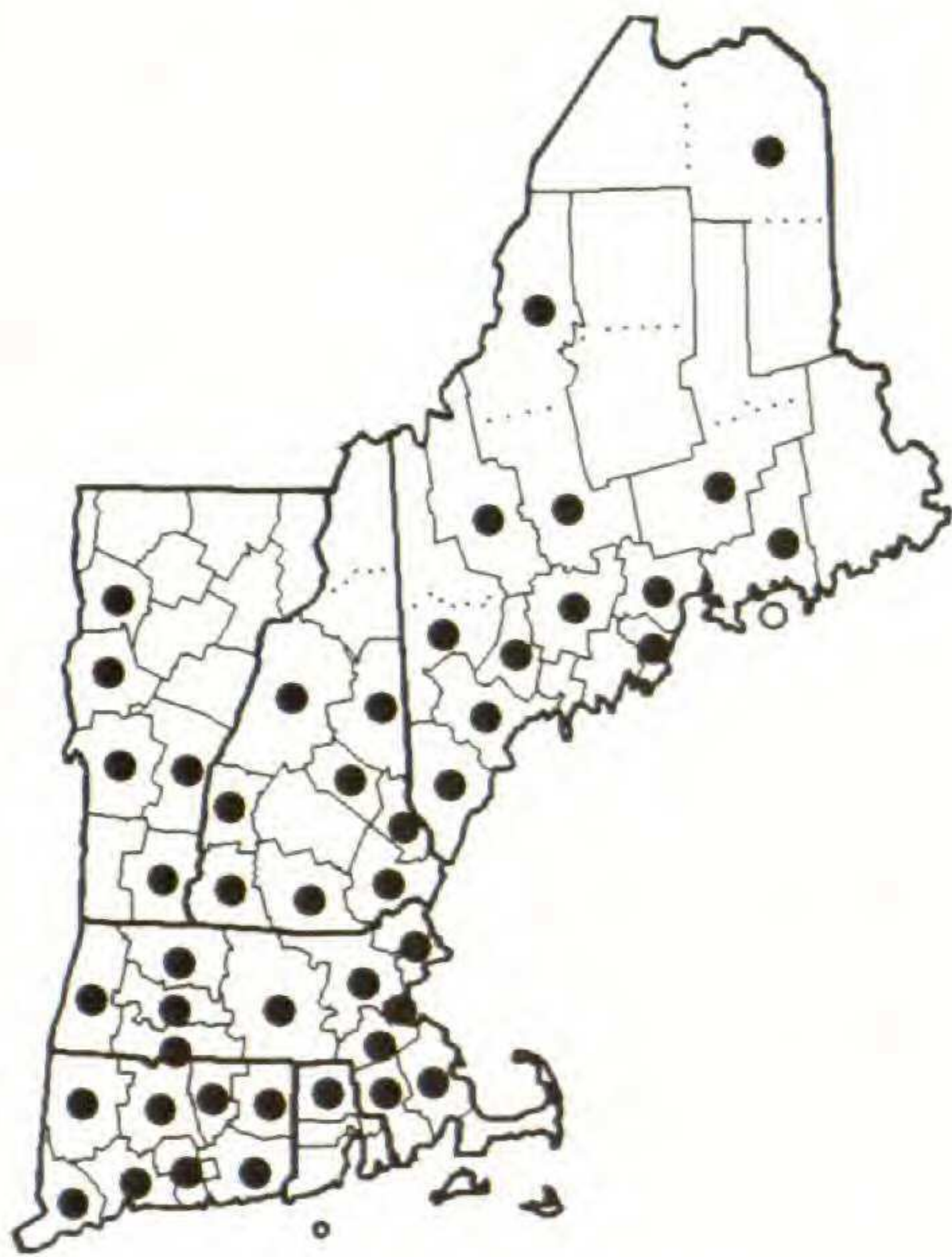
*HORDEUM PUSILLUM**HORDEUM VULGARE**KOELERIA MACRANTHA**Leersia oryzoides*

Figure 45. Distribution maps for *HORDEUM PUSILLUM*, *H. VULGARE*, *KOELERIA MACRANTHA* and *Leersia oryzoides*.



Leersia virginica



Leptochloa fascicularis



LEPTOCHLOA PANICEA
subsp. *MUCRONATA*



Leymus mollis

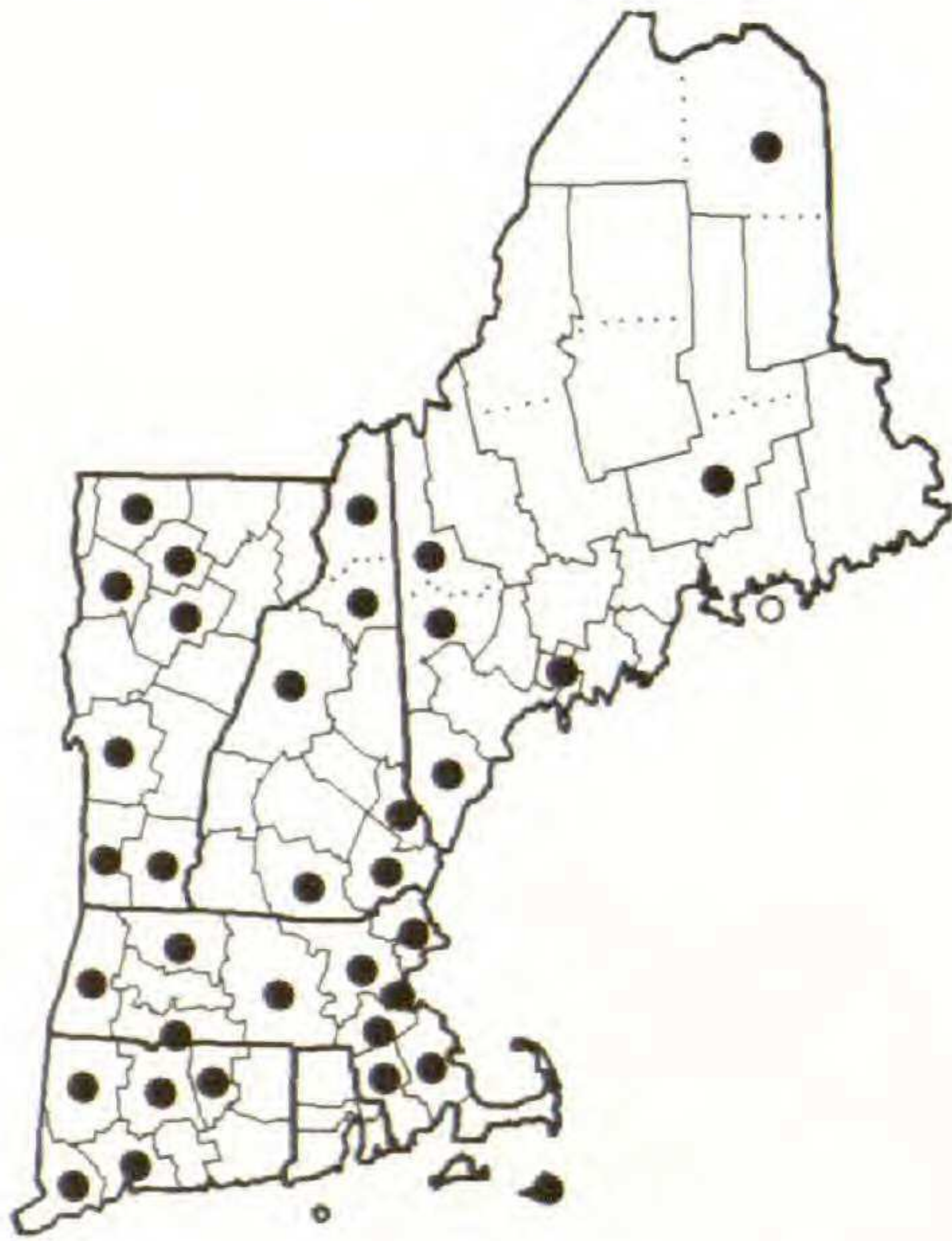
Figure 46. Distribution maps for *Leersia virginica*, *Leptochloa fascicularis*, *L. PANICEA* subsp. *MUCRONATA* and *Leymus mollis*.



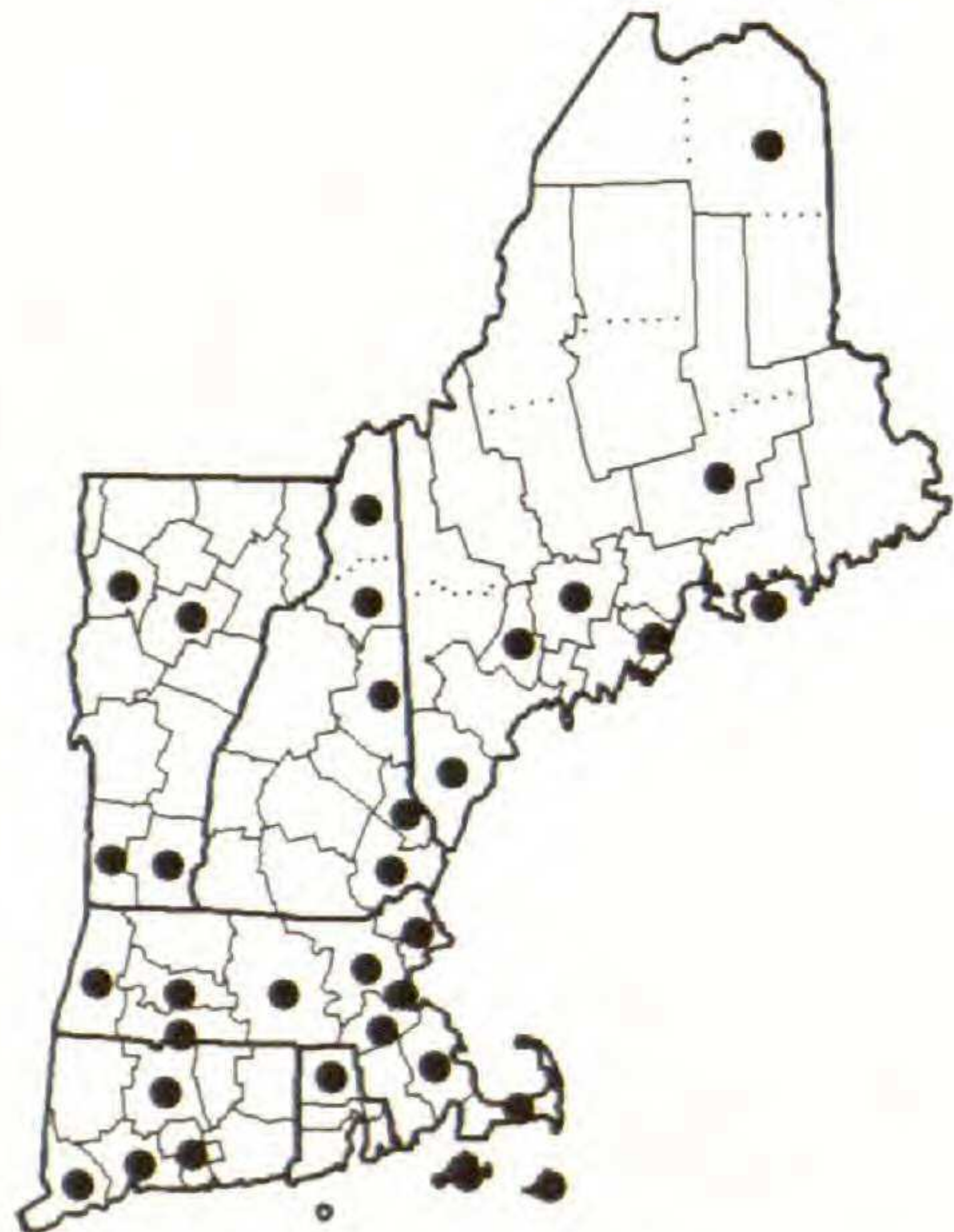
LOLIUM ARUNDINACEUM



LOLIUM GIGANTEUM

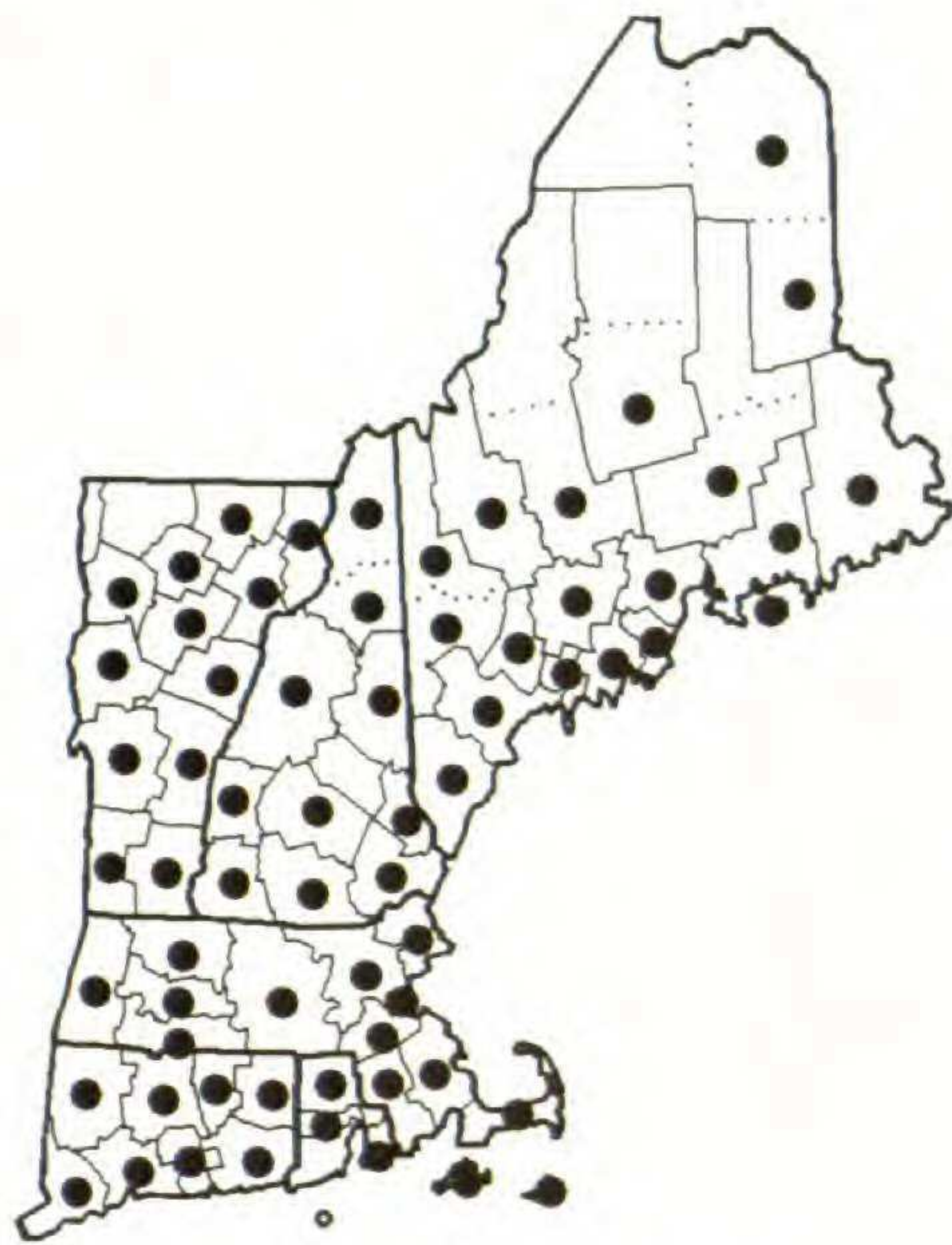


LOLIUM MULTIFLORUM



LOLIUM PERENNE

Figure 47. Distribution maps for *LOLIUM ARUNDINACEUM*, *L. GIGANTEUM*, *L. MULTIFLORUM* and *L. PERENNE*.



LOLIUM PRATENSE



LOLIUM TEMULENTUM



LYCURUS PHLEOIDES

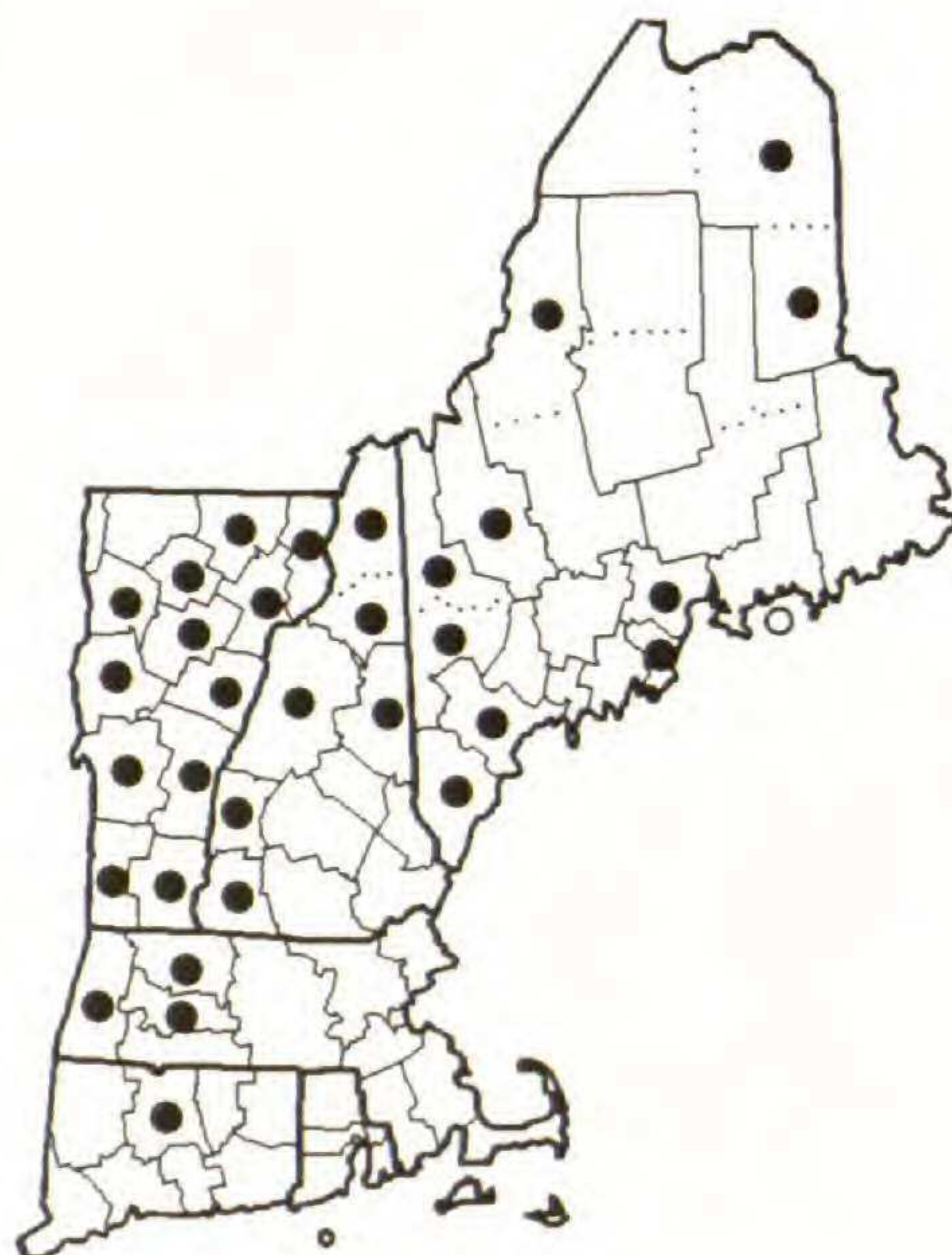


MIBORA MINIMA

Figure 48. Distribution maps for *LOLIUM PRATENSE*, *L. TEMULENTUM*, *LYCURUS PHLEOIDES* and *MIBORA MINIMA*.



MICROSTEGIUM VIMINEUM



Milium effusum



MISCANTHUS SACCHARIFLORUS



MISCANTHUS SINENSIS

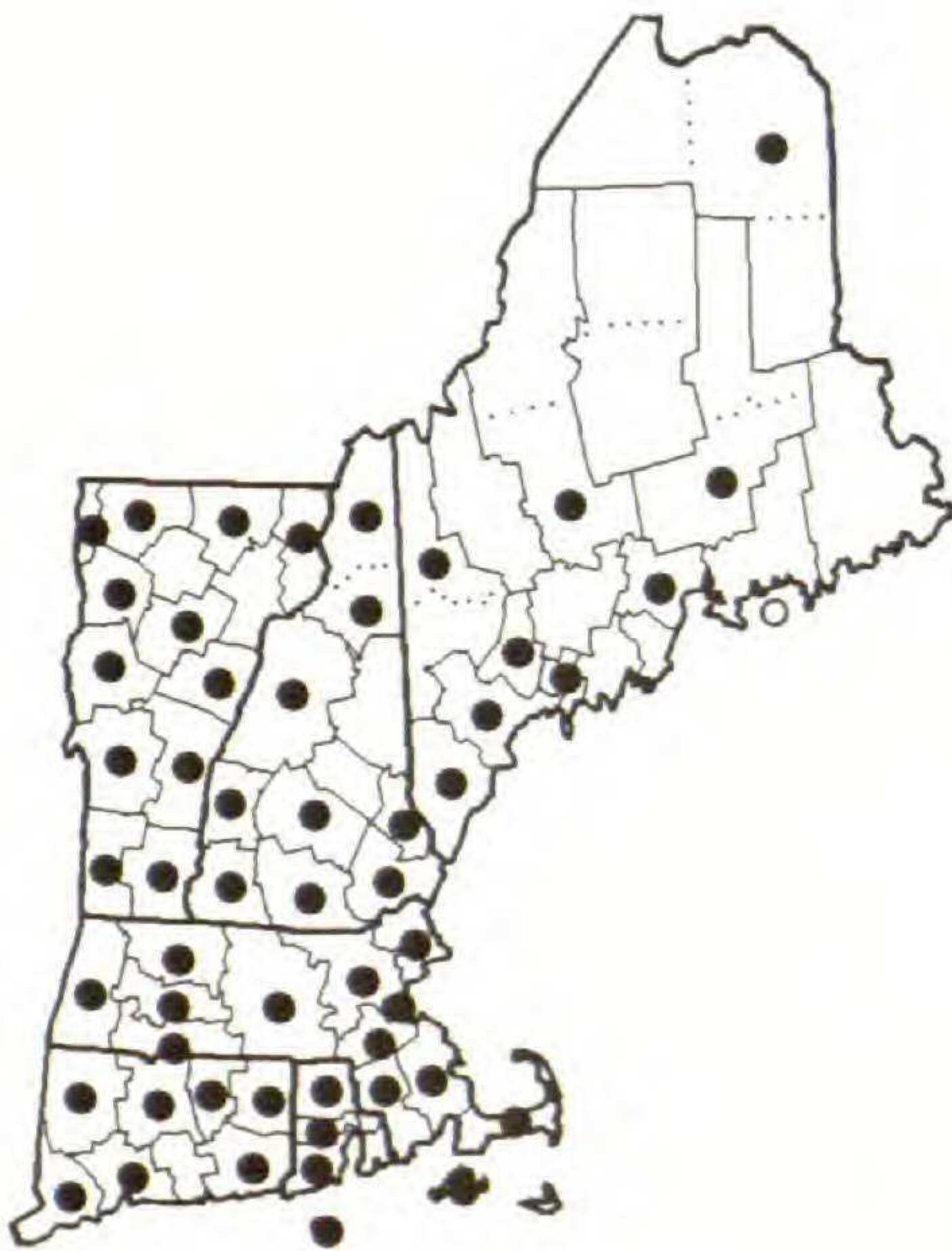
Figure 49. Distribution maps for *MICROSTEGIUM VIMINEUM*, *Milium effusum*, *MISCANTHUS SACCHARIFLORUS* and *M. SINENSIS*.



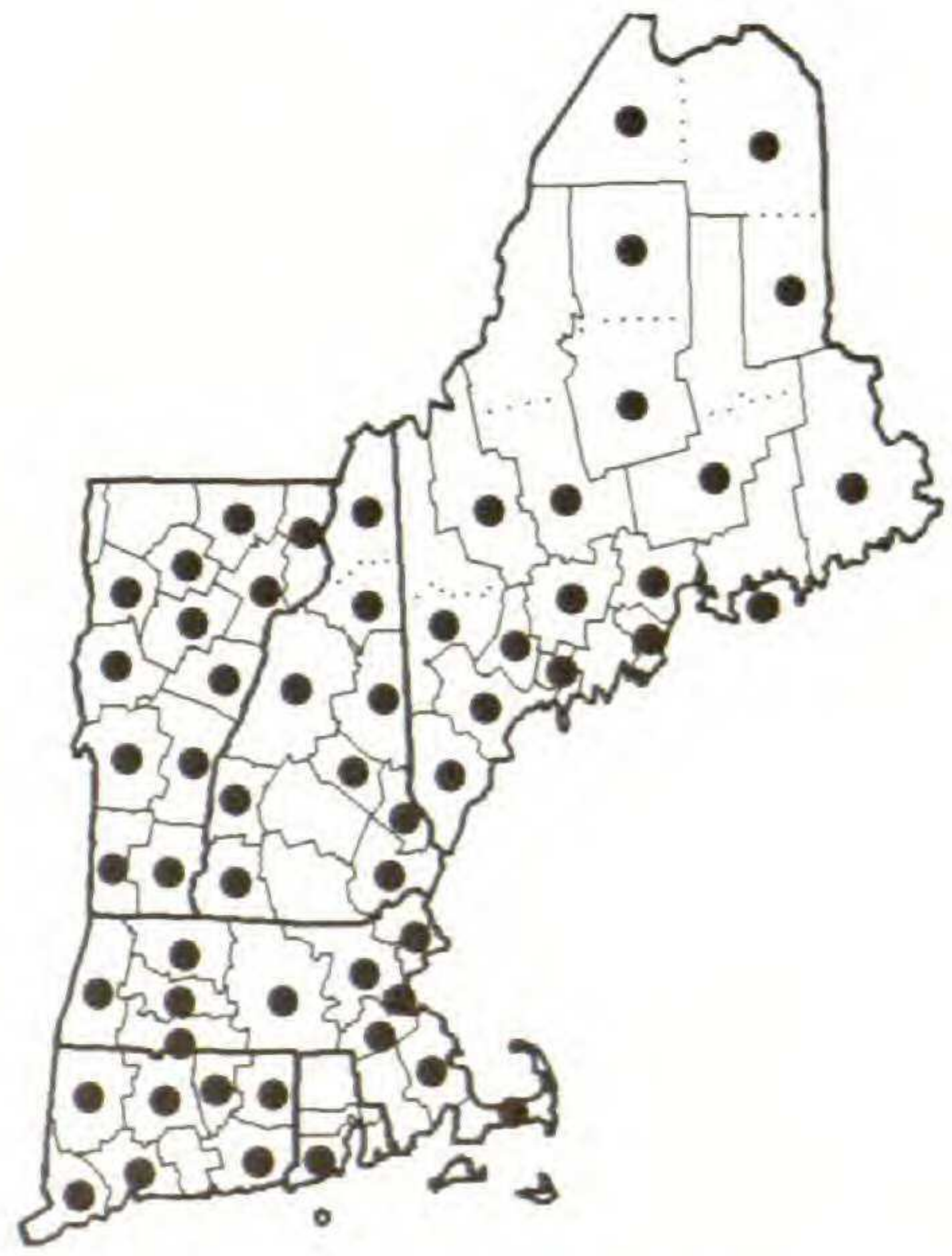
MOLINIA CAERULEA



Muhlenbergia capillaris

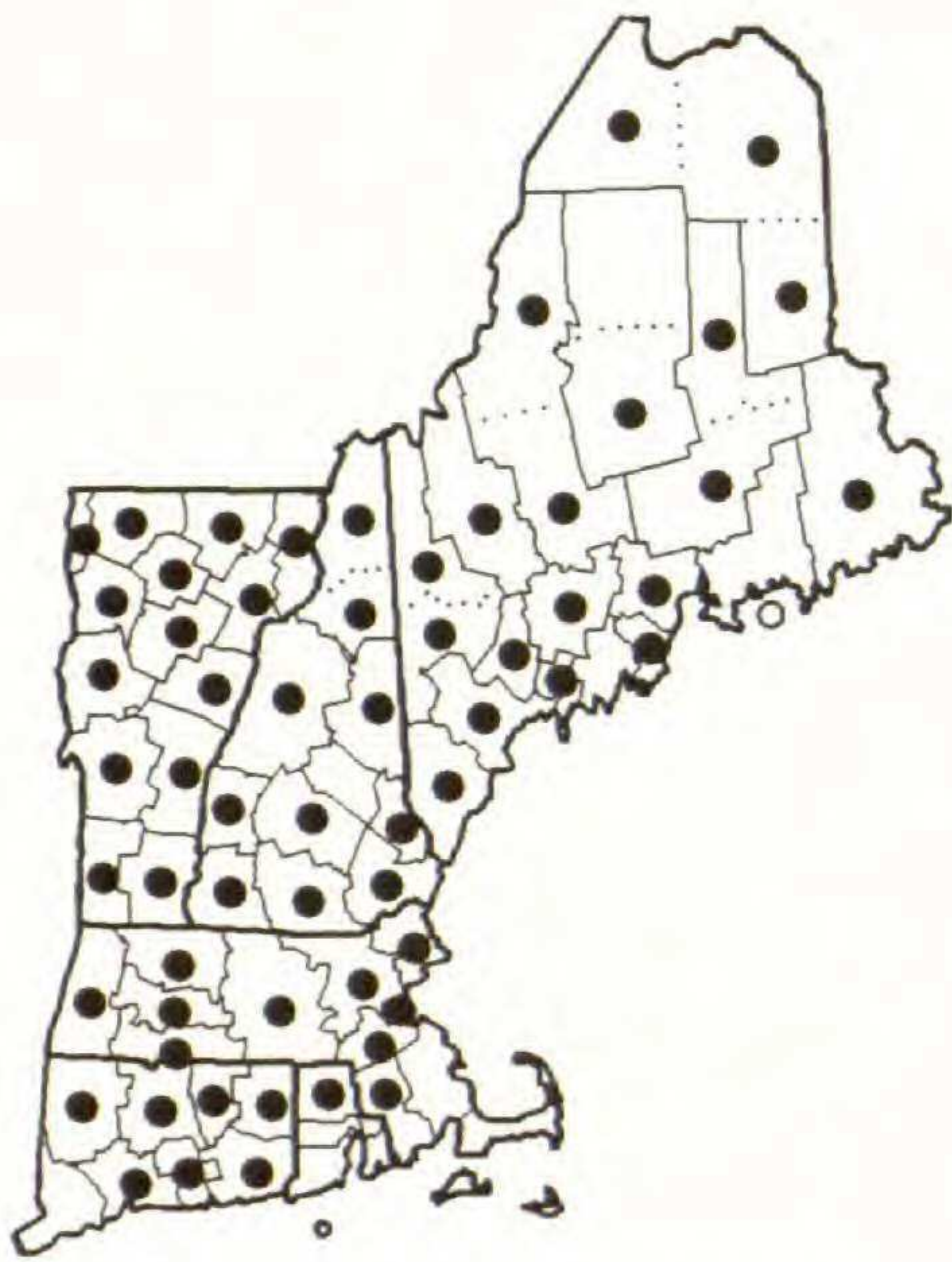


Muhlenbergia frondosa

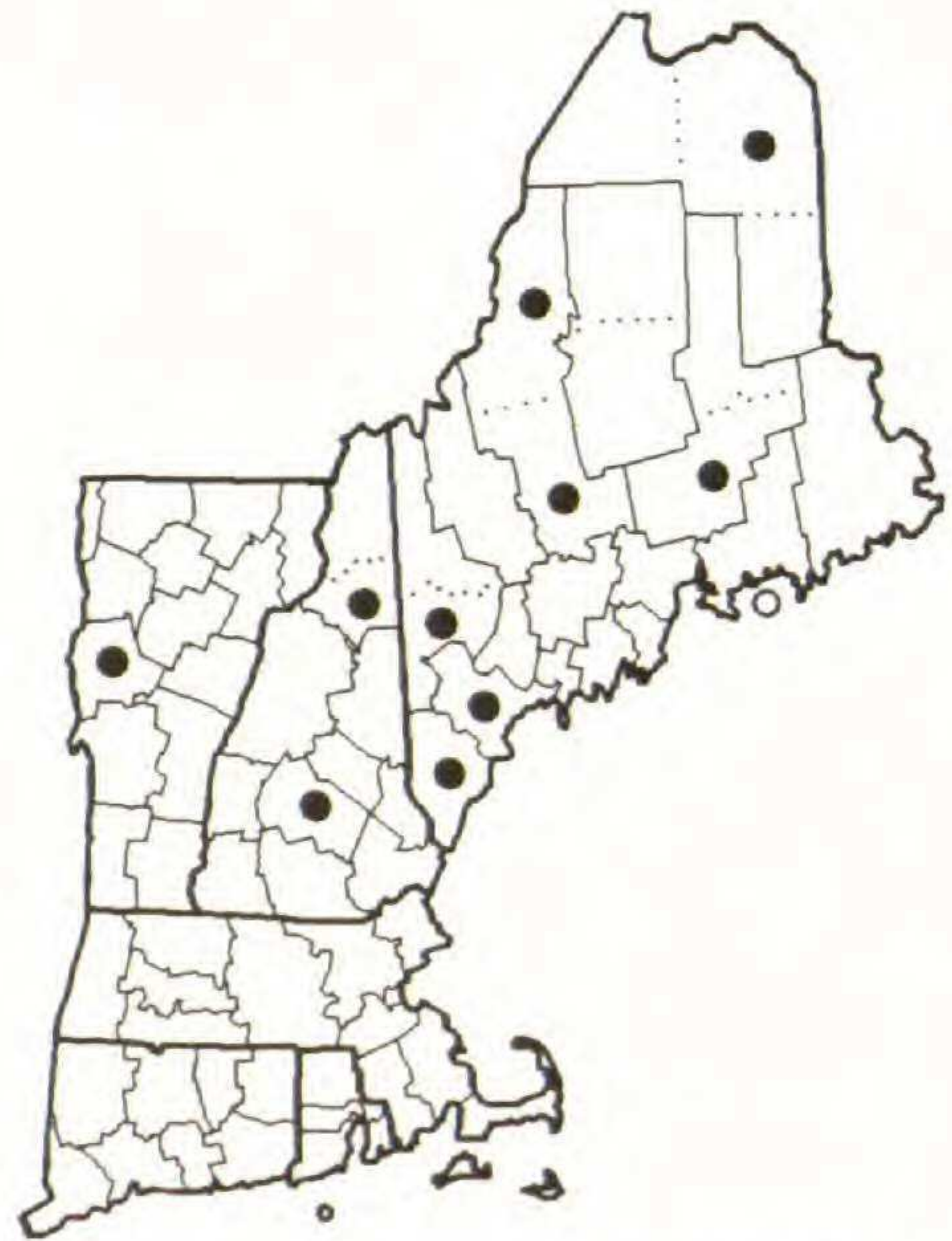


Muhlenbergia glomerata

Figure 50. Distribution maps for *MOLINIA CAERULEA*, *Muhlenbergia capillaris*, *M. frondosa* and *M. glomerata*.



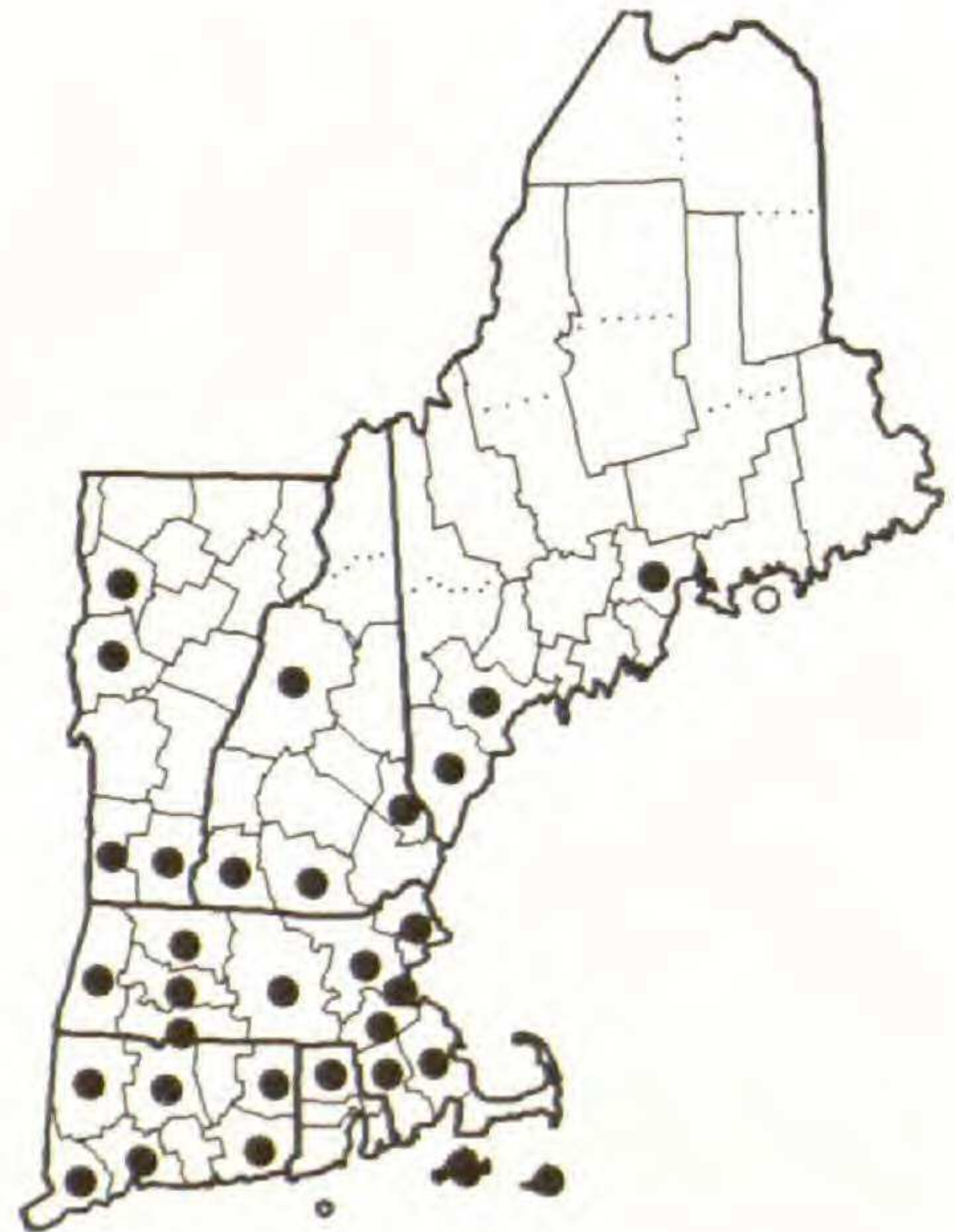
Muhlenbergia mexicana



MUHLENBERGIA RACEMOSA

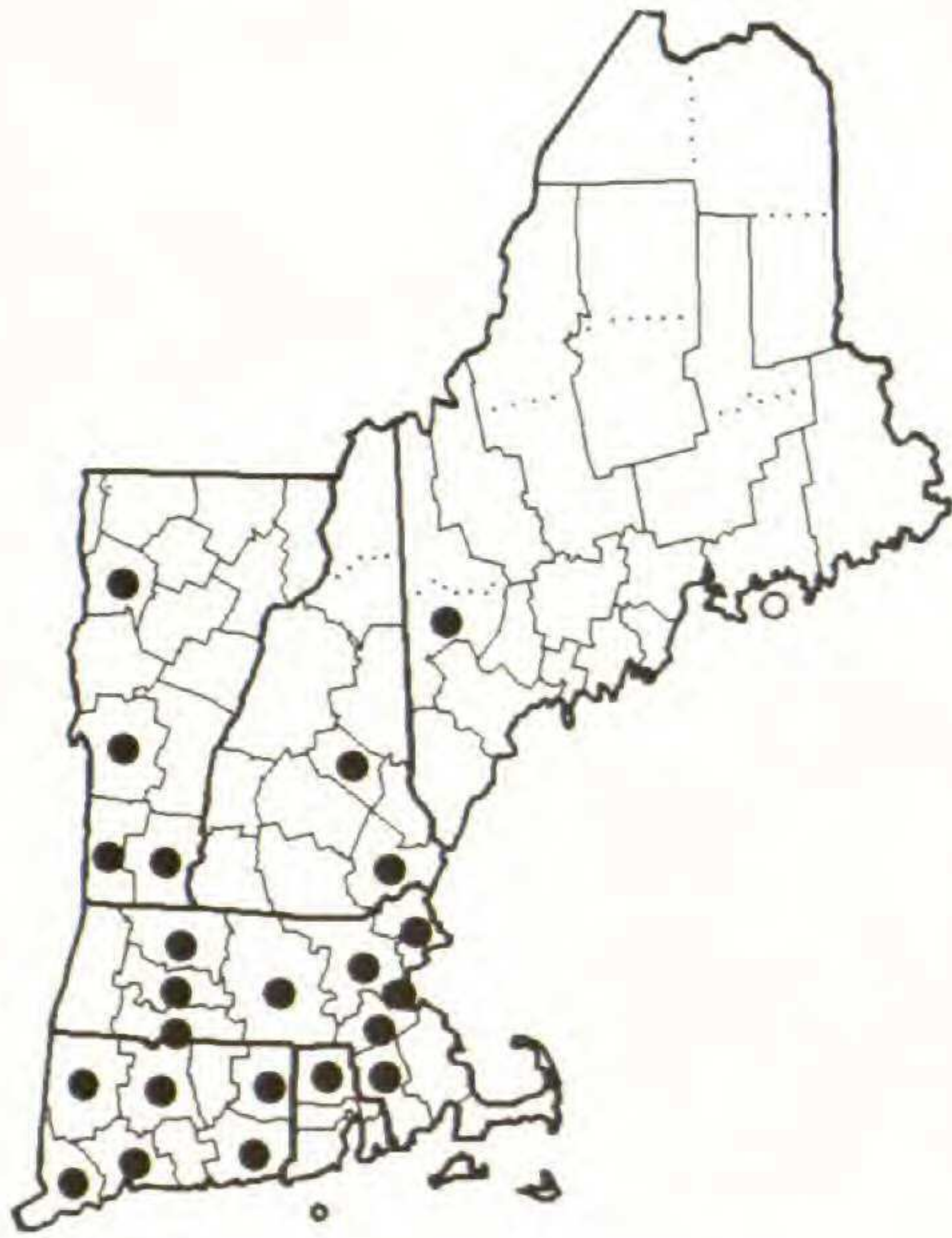


Muhlenbergia richardsonis

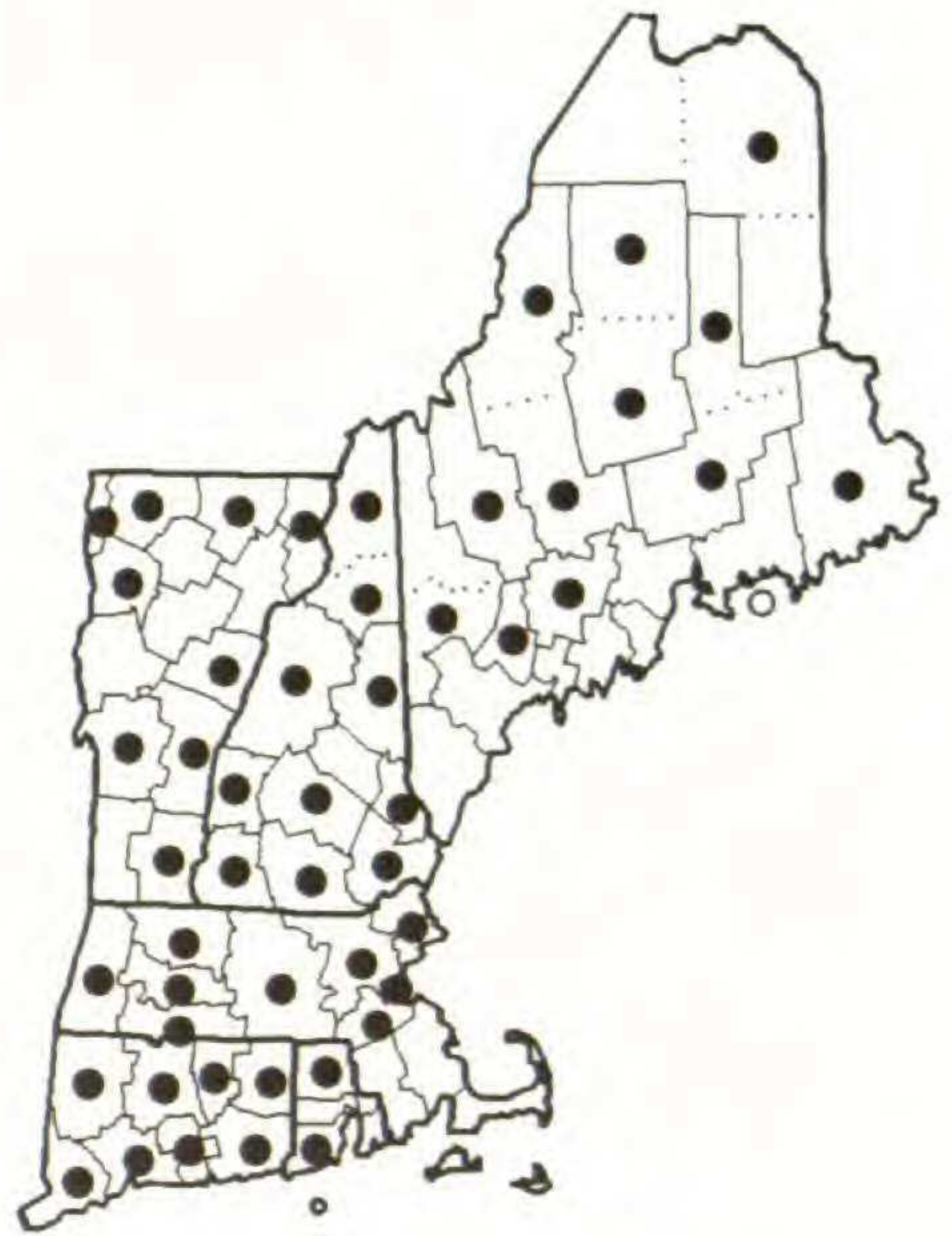


Muhlenbergia schreberi

Figure 51. Distribution maps for *Muhlenbergia mexicana*, *M. RACEMOSA*, *M. richardsonis* and *M. schreberi*.



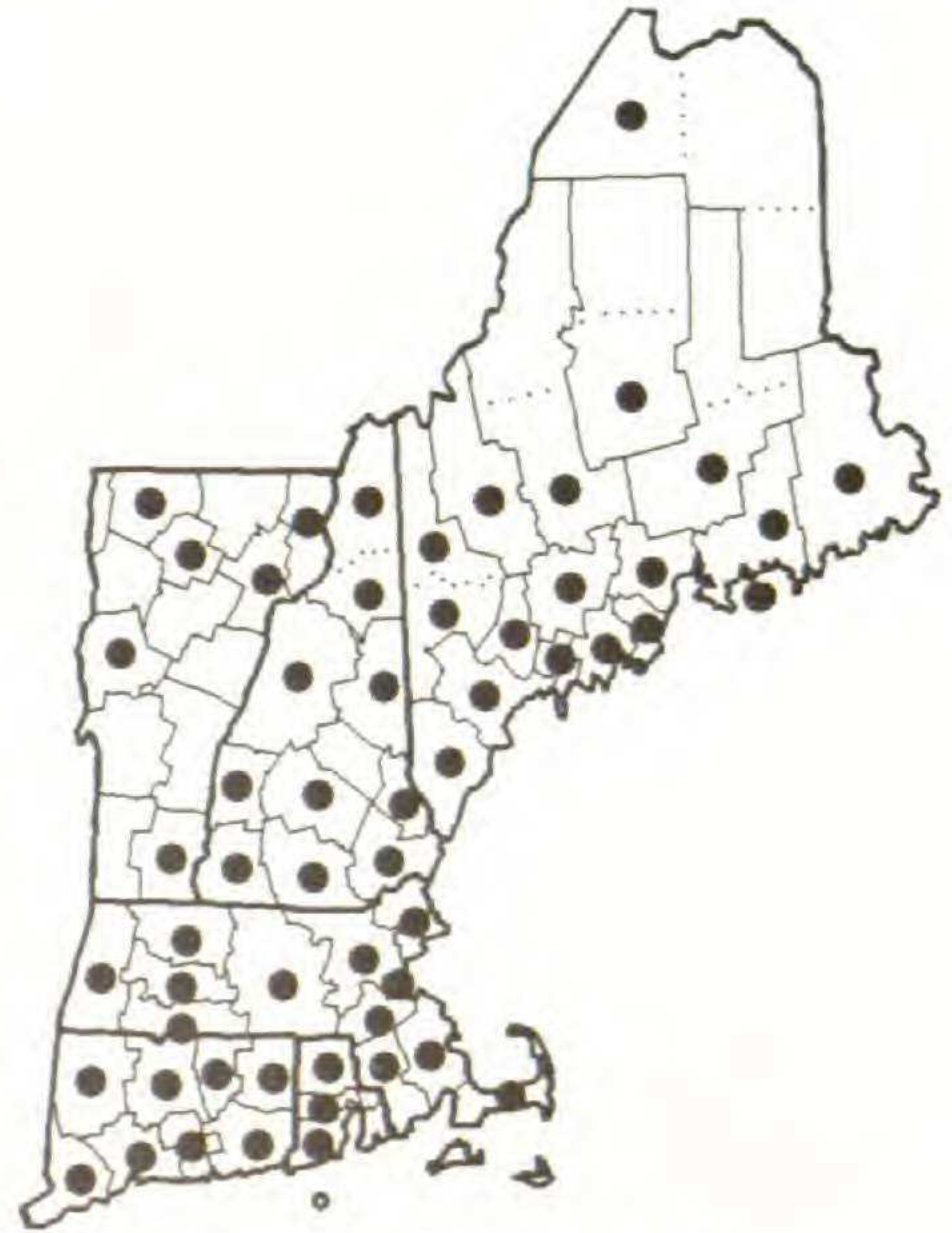
Muhlenbergia sobolifera



Muhlenbergia sylvatica



Muhlenbergia tenuiflora

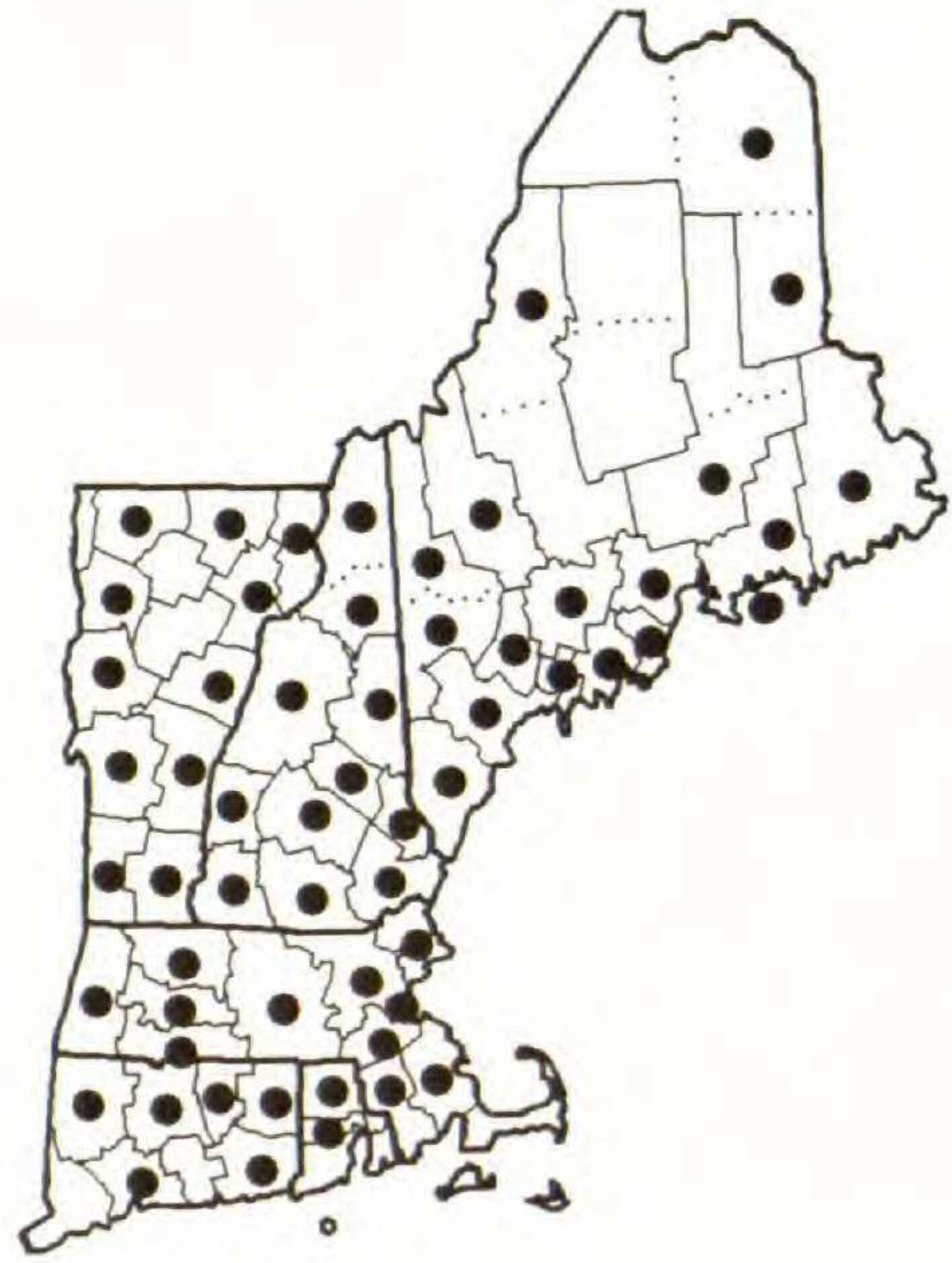


Muhlenbergia uniflora

Figure 52. Distribution maps for *Muhlenbergia sobolifera*, *M. sylvatica*, *M. tenuiflora* and *M. uniflora*.



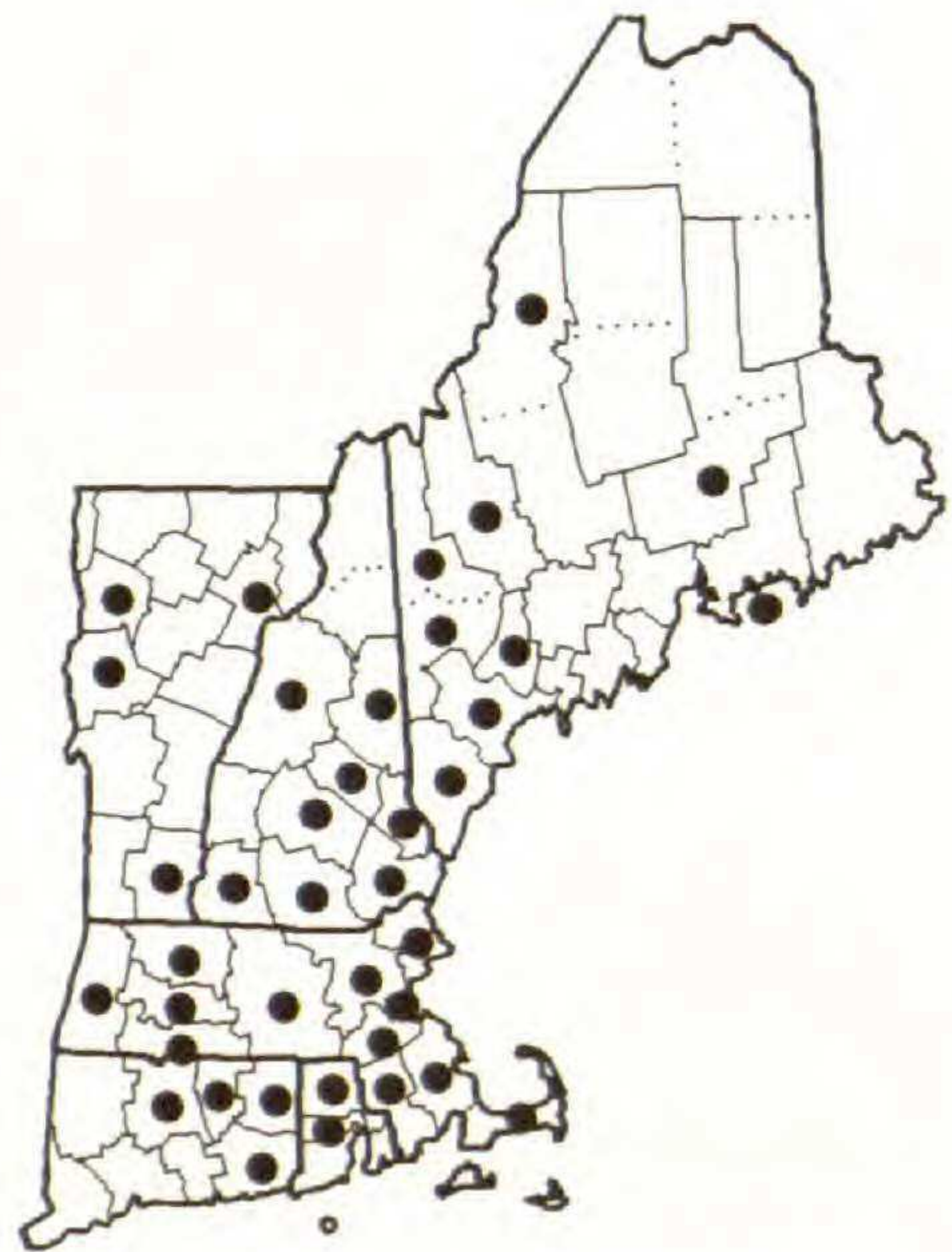
NARDUS STRICTA



Oryzopsis asperifolia



Oryzopsis canadensis

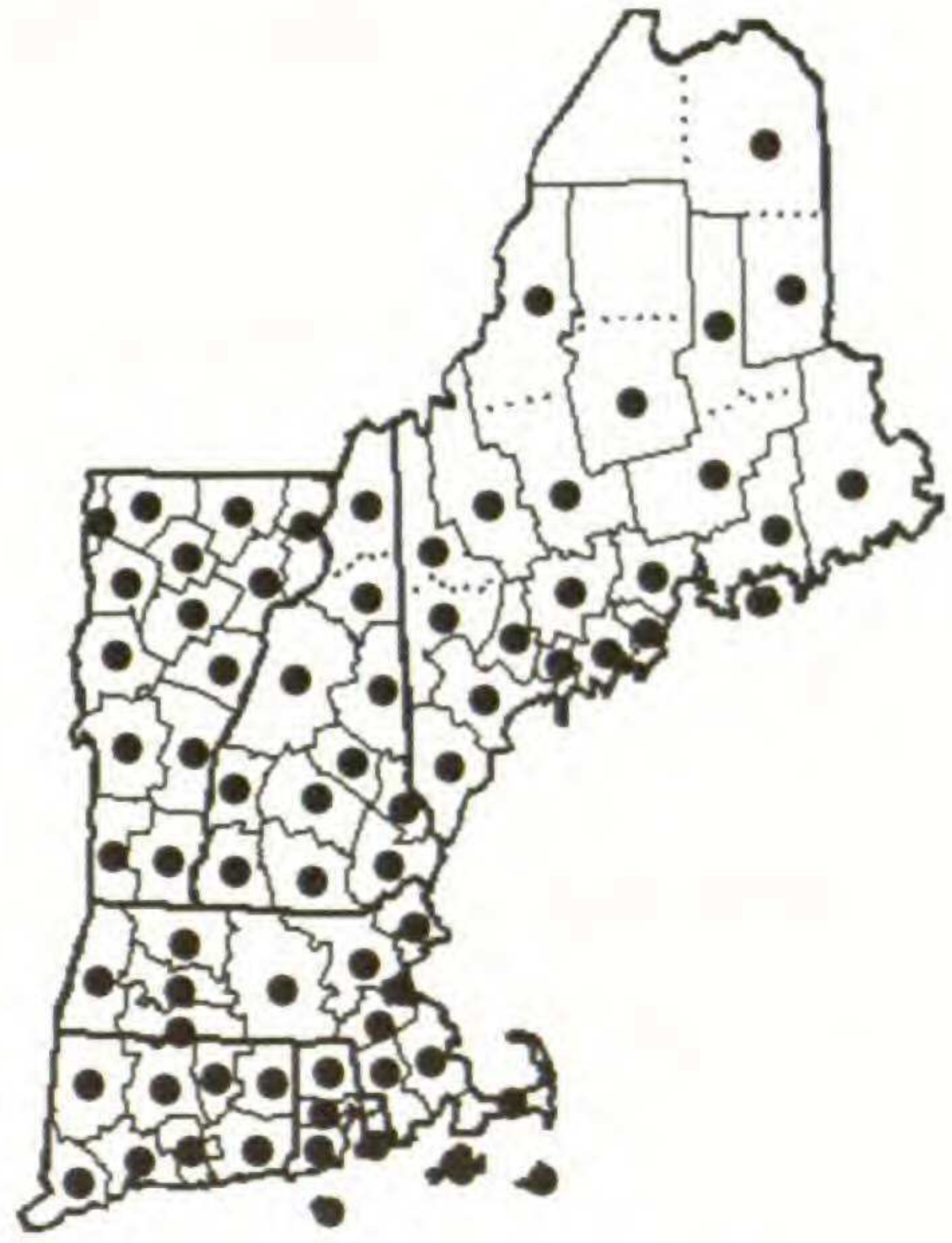


Oryzopsis pungens

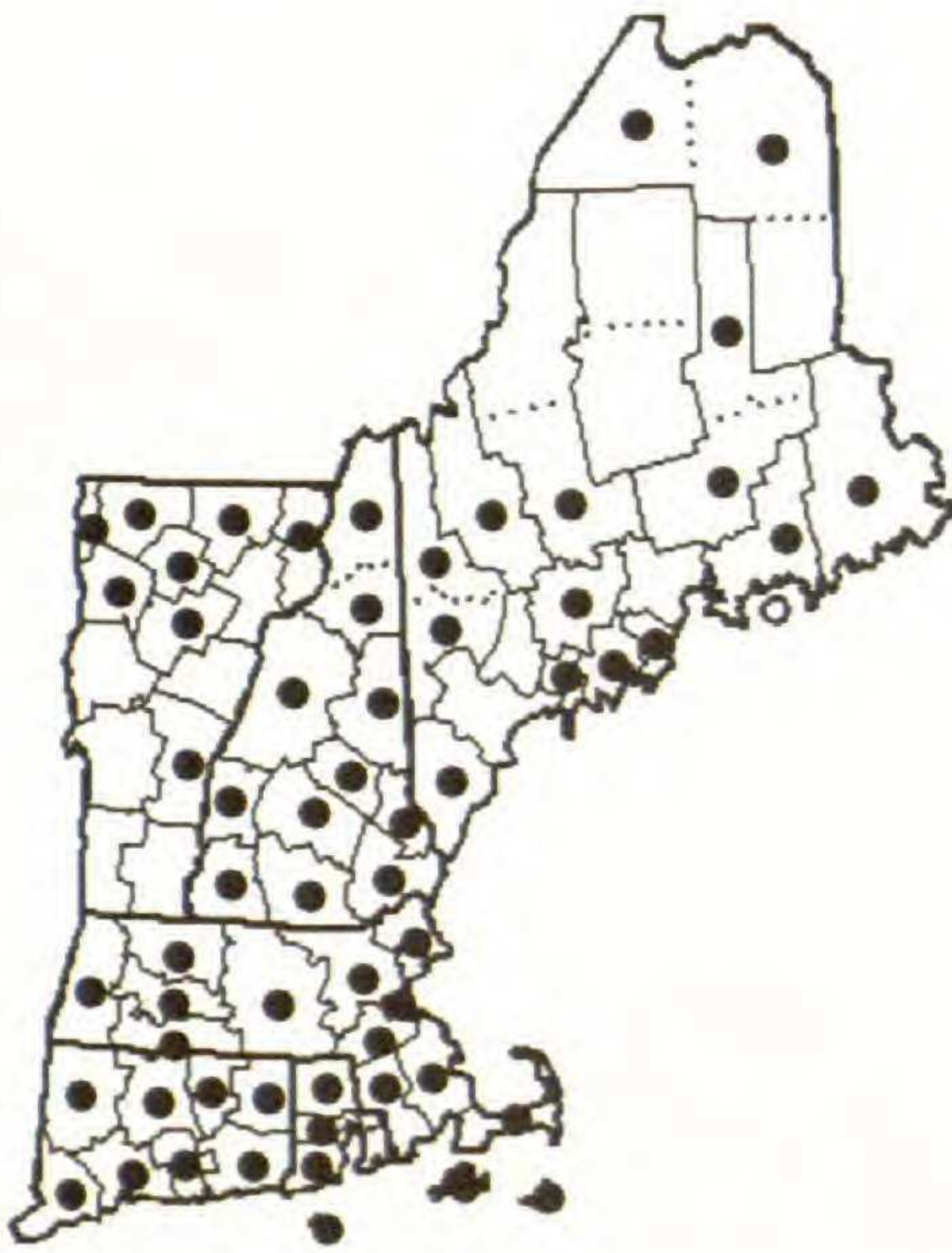
Figure 53. Distribution maps for *NARDUS STRICTA*, *Oryzopsis asperifolia*, *O. canadensis* and *O. pungens*.



Panicum acuminatum
var. *acuminatum*



Panicum acuminatum
var. *fasciculatum*



Panicum acuminatum
var. *lindheimeri*



Panicum amarum var. *amarum*

Figure 54. Distribution maps for *Panicum acuminatum* var. *acuminatum*, *P. acuminatum* var. *fasciculatum*, *P. acuminatum* var. *lindheimeri* and *P. amarum* var. *amarum*.

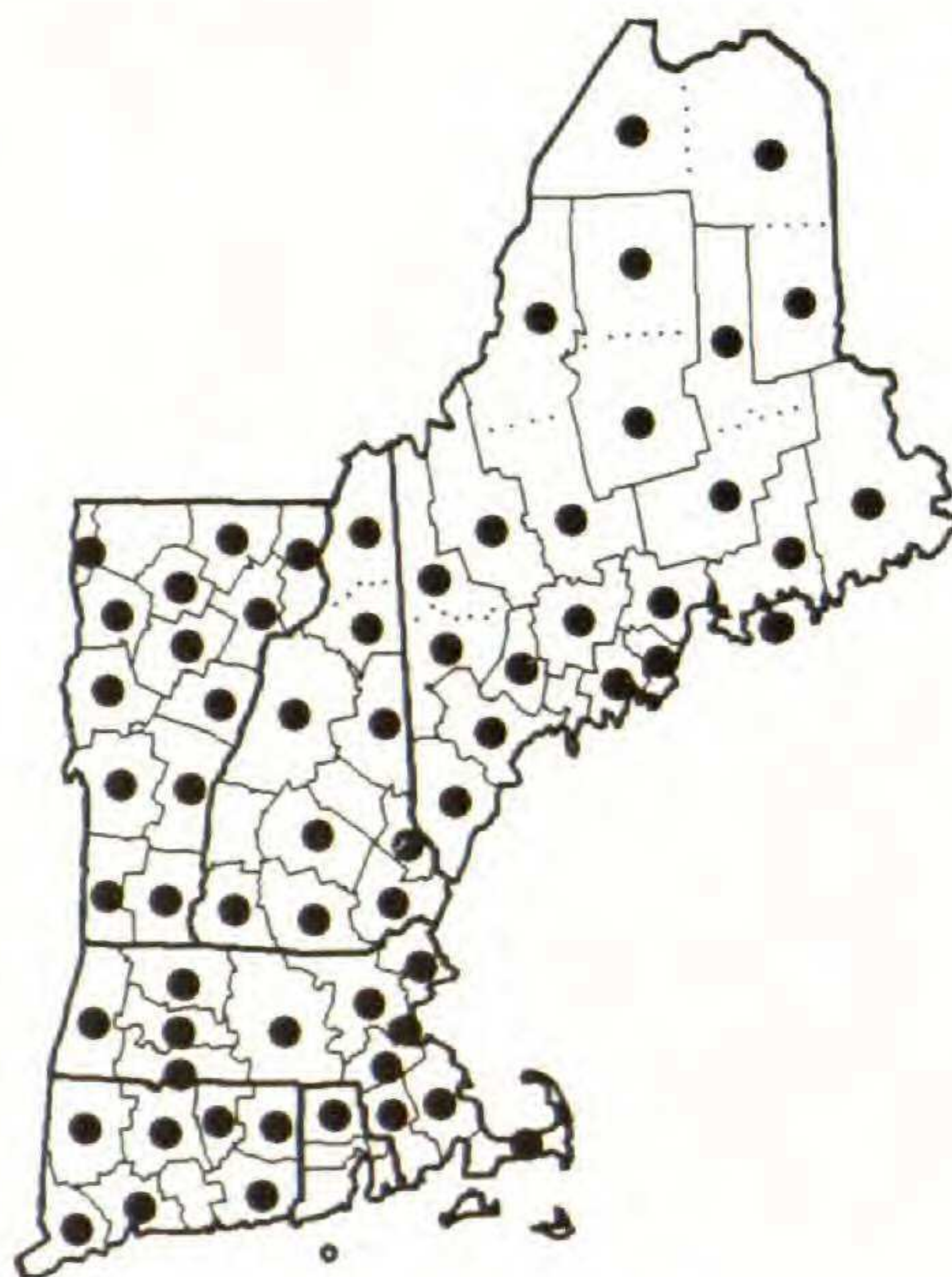
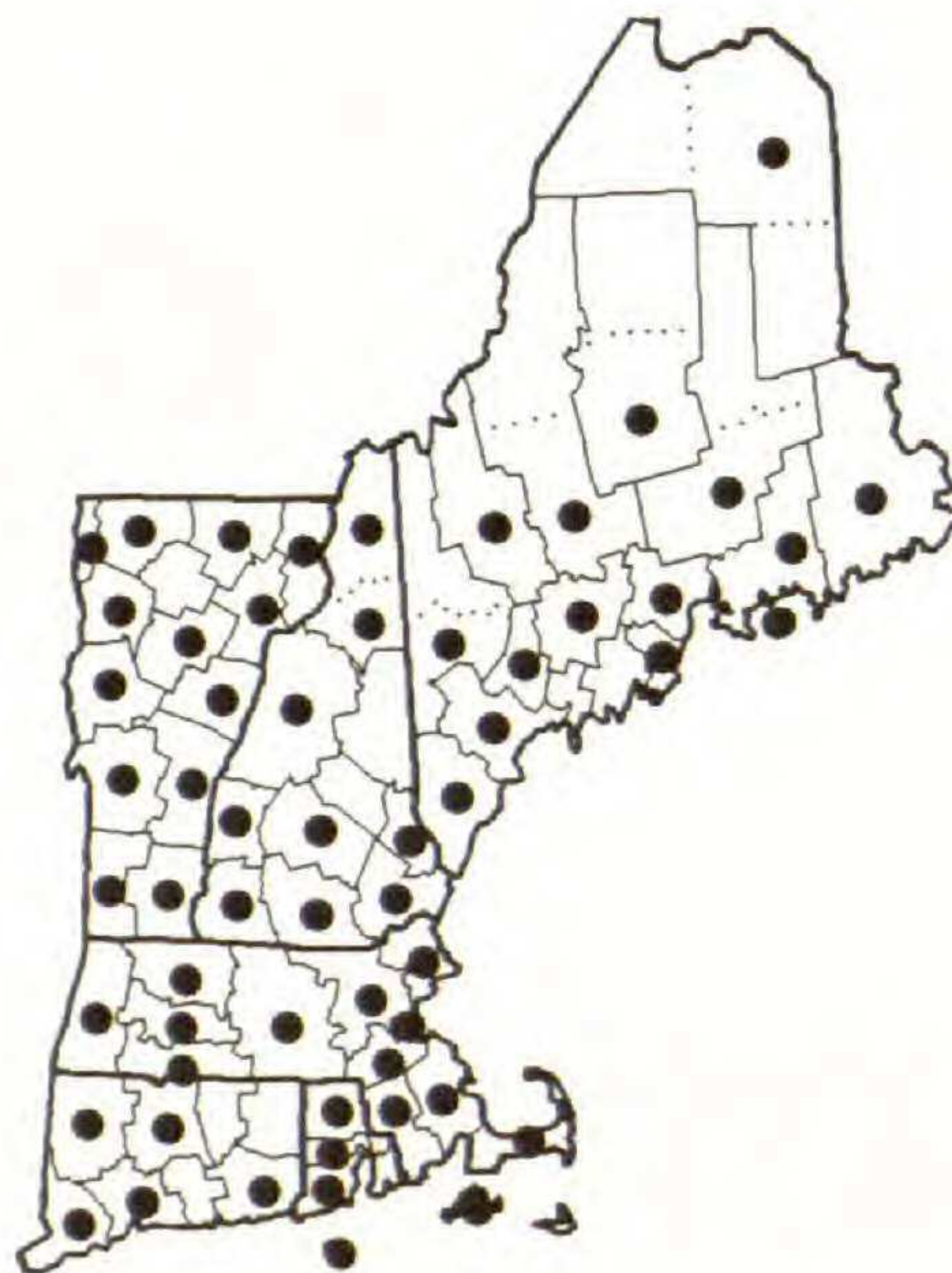
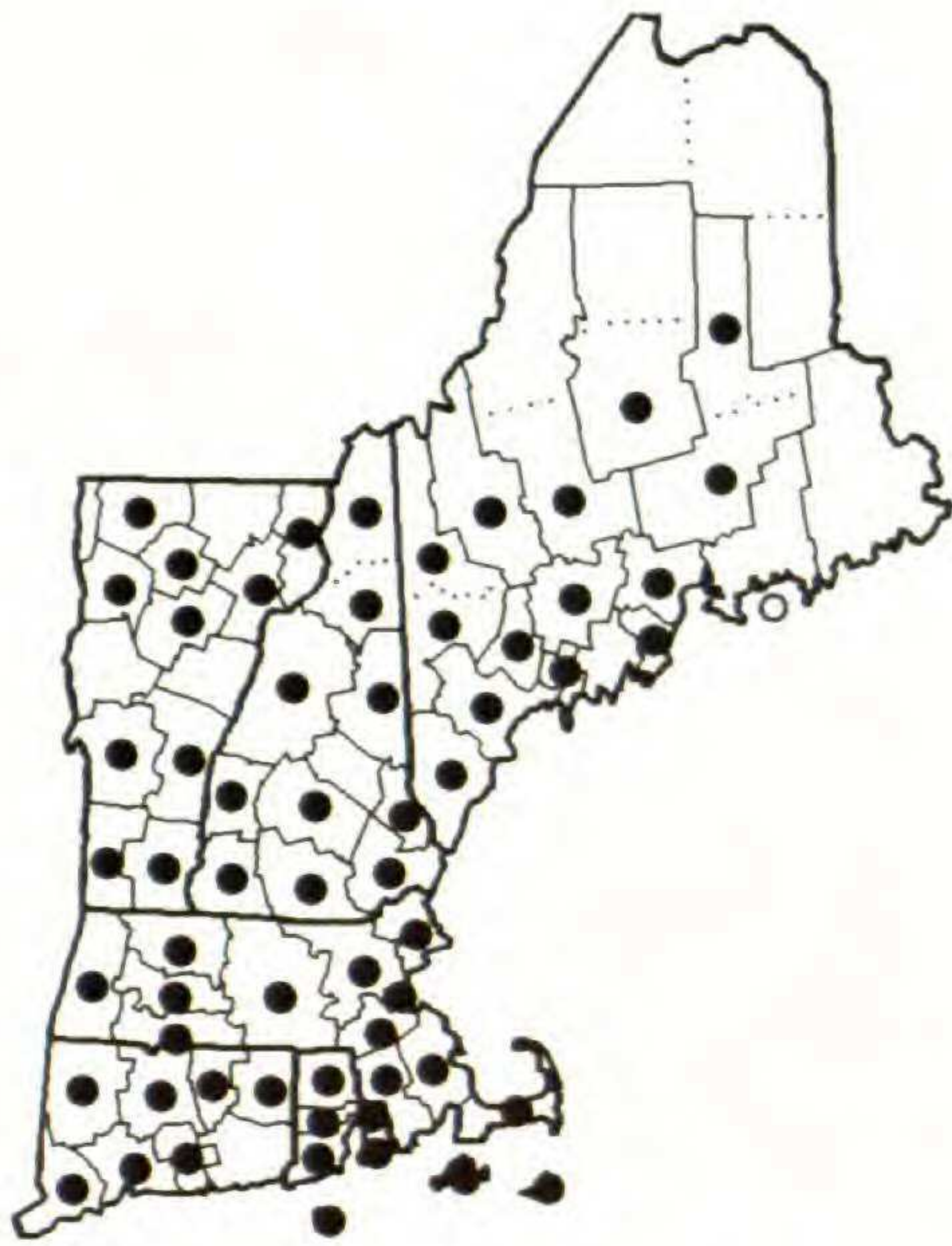
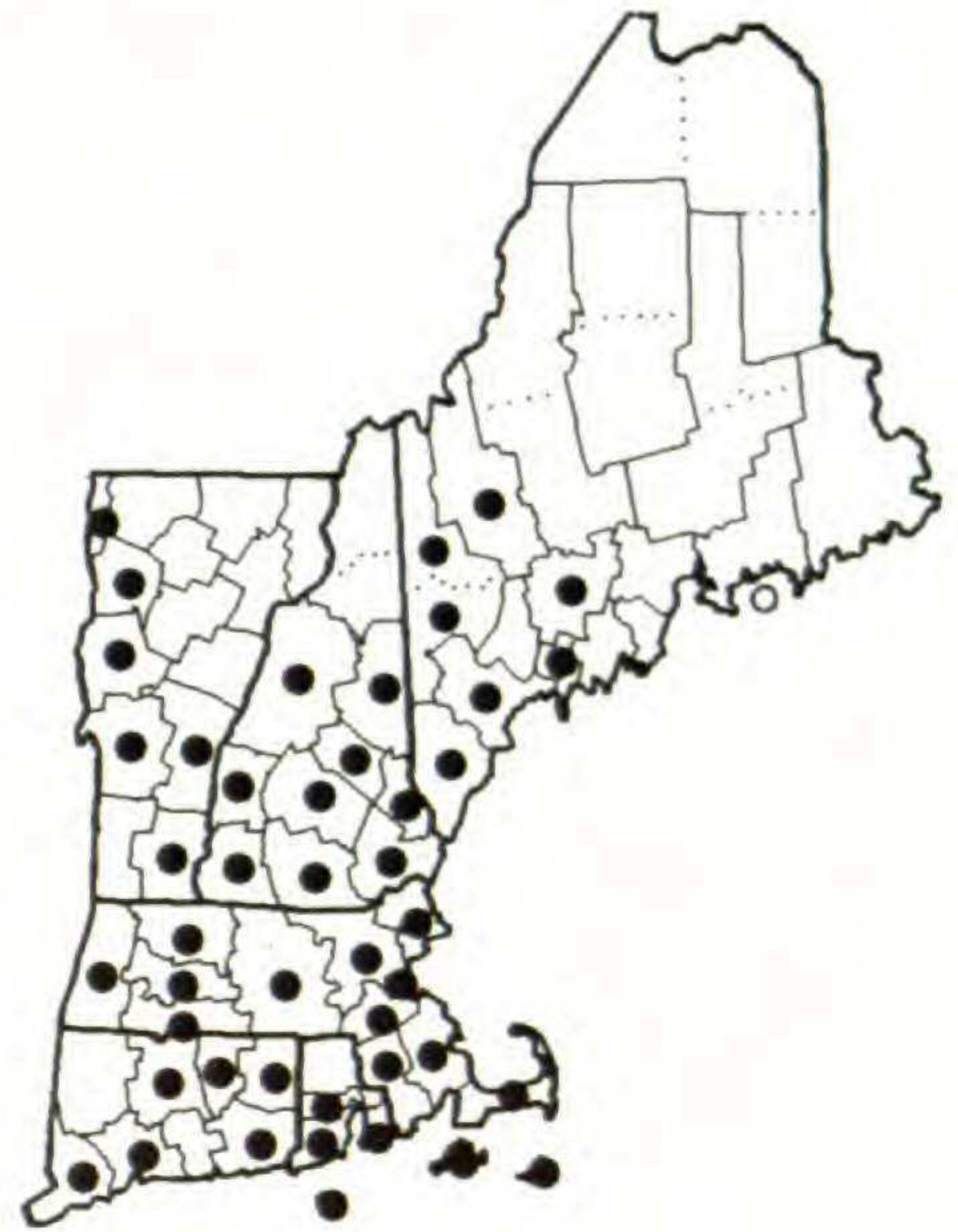
*Panicum amarum* var. *amarulum**Panicum boreale**Panicum boscii**Panicum capillare*

Figure 55. Distribution maps for *Panicum amarum* var. *amarulum*, *P. boreale*, *P. boscii* and *P. capillare*.



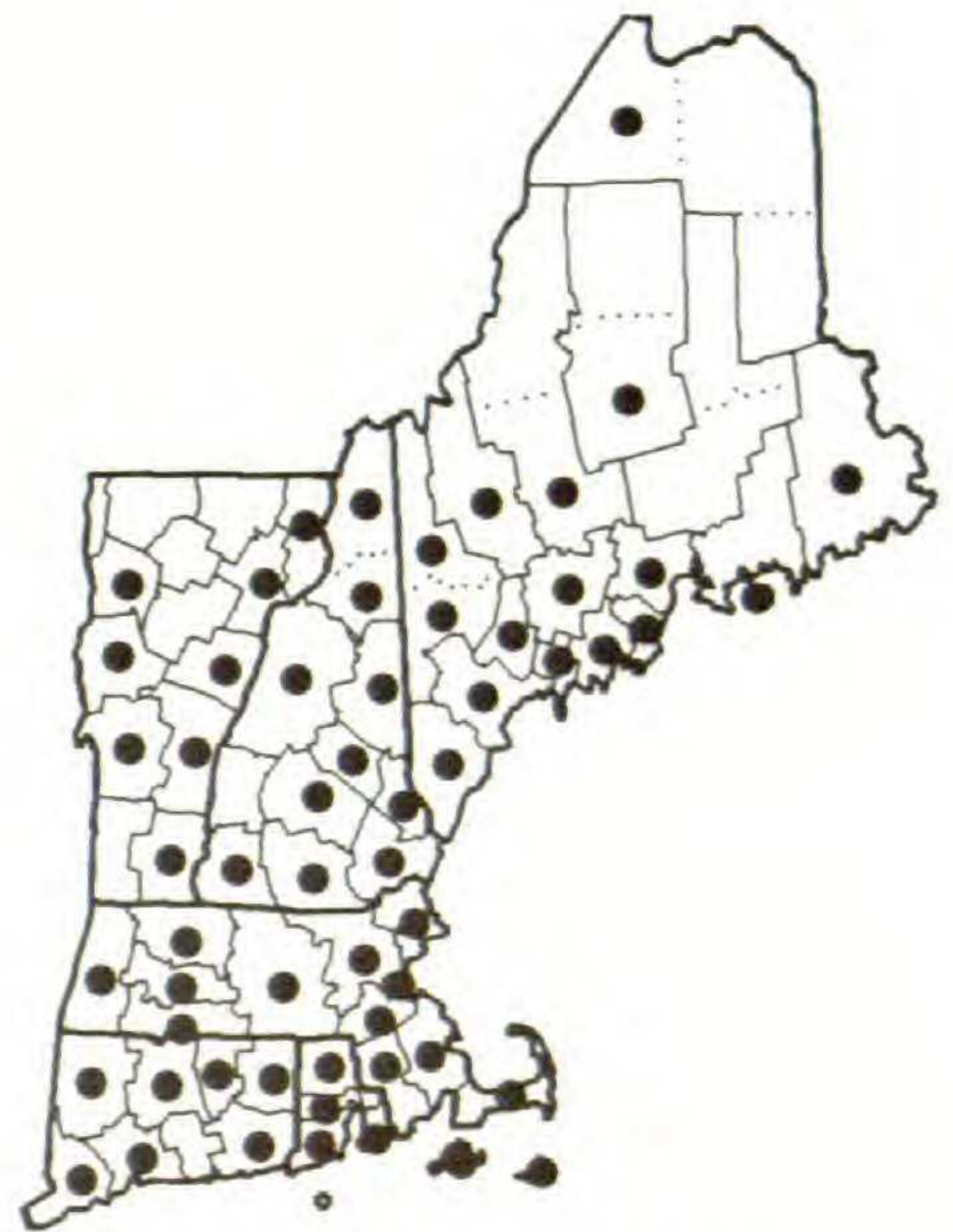
Panicum clandestinum



Panicum columbianum

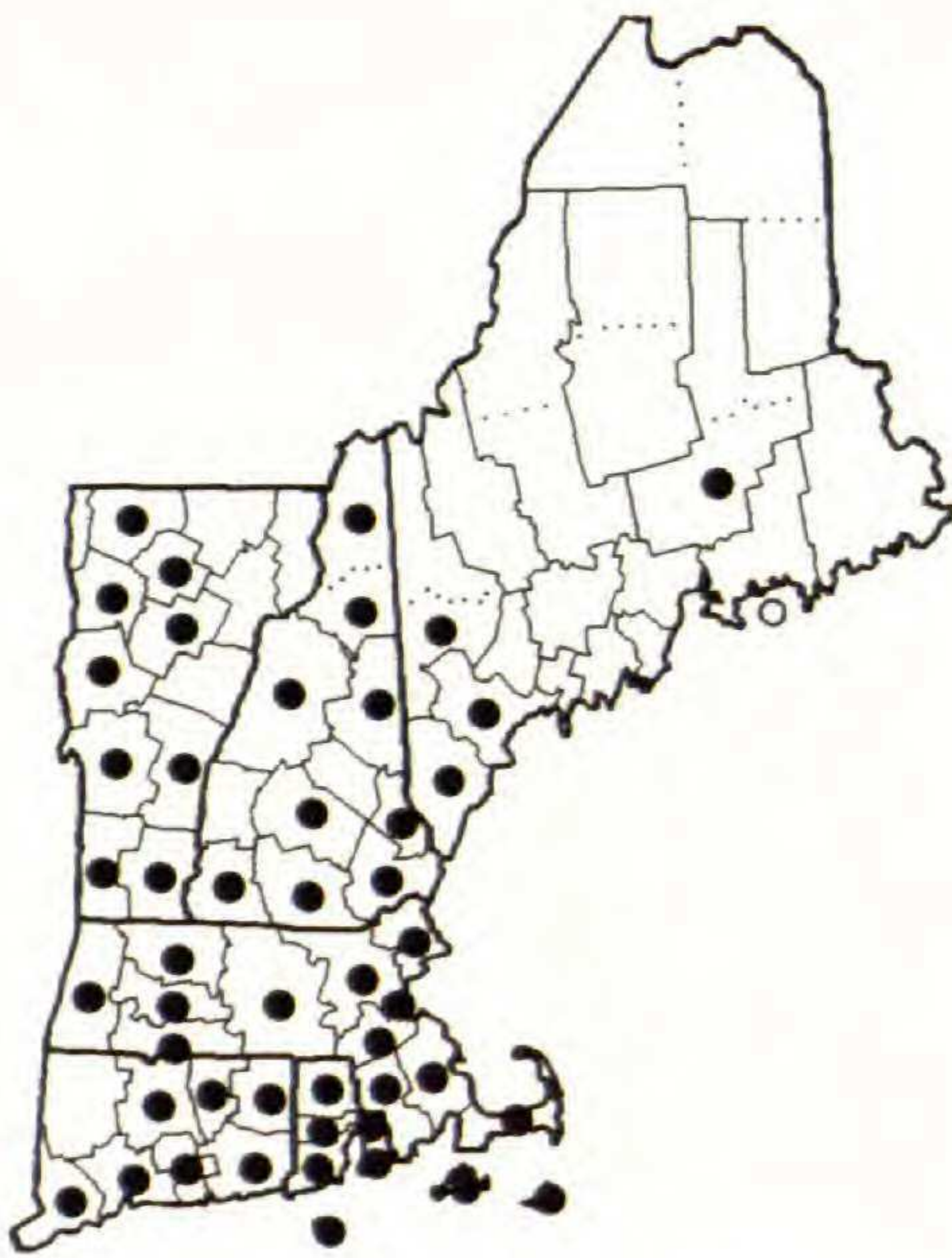


Panicum commutatum
var. *ashei*



Panicum depauperatum

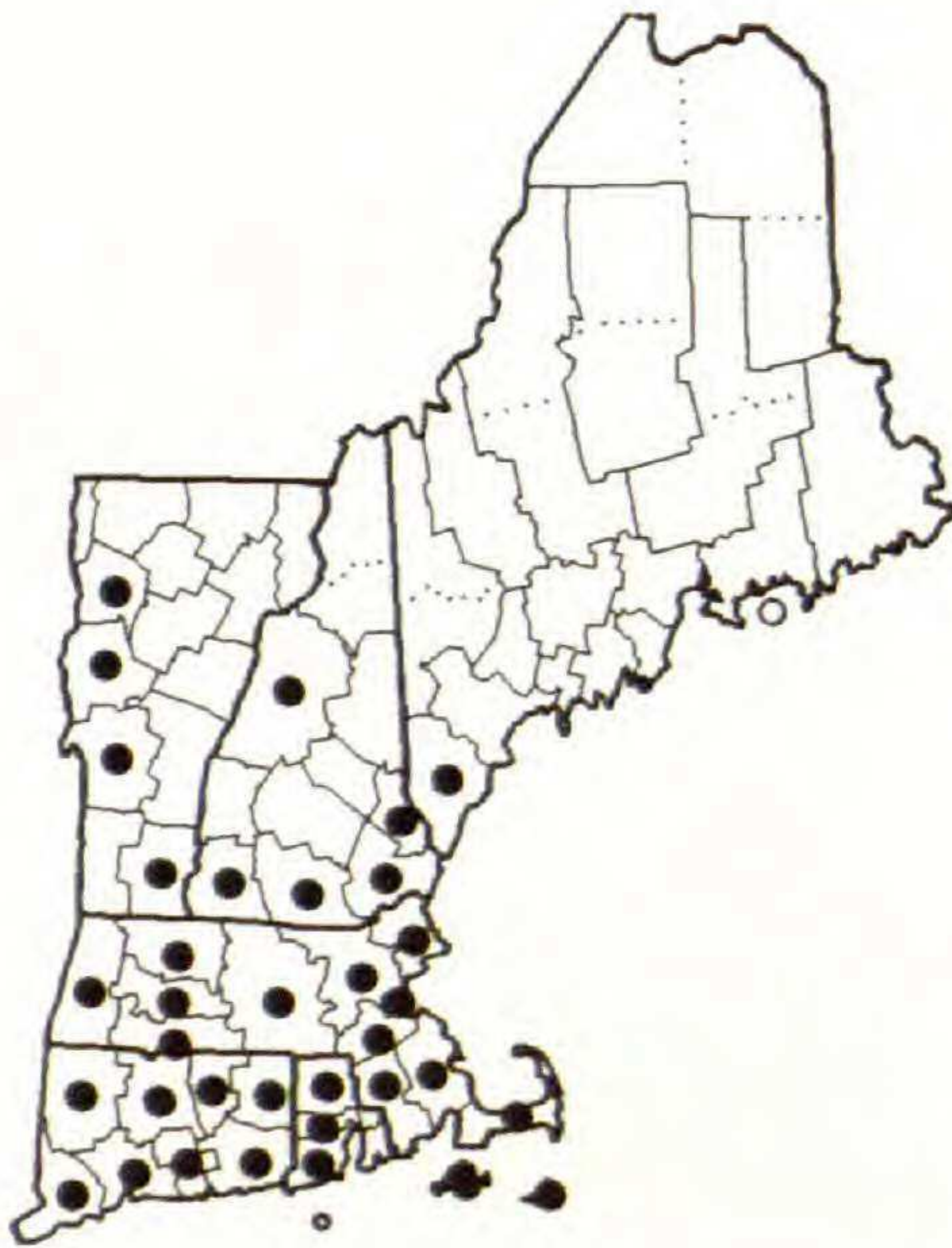
Figure 56. Distribution maps for *Panicum clandestinum*, *P. columbianum*, *P. commutatum* var. *ashei* and *P. depauperatum*.



Panicum dichotomiflorum
var. *dichotomiflorum*



Panicum dichotomiflorum
var. *puritanorum*



Panicum dichotomum
var. *dichotomum*



Panicum dichotomum
var. *lucidum*

Figure 57. Distribution maps for *Panicum dichotomiflorum* var. *dichotomiflorum*, *P. dichotomiflorum* var. *puritanorum*, *P. dichotomum* var. *dichotomum* and *P. dichotomum* var. *lucidum*.



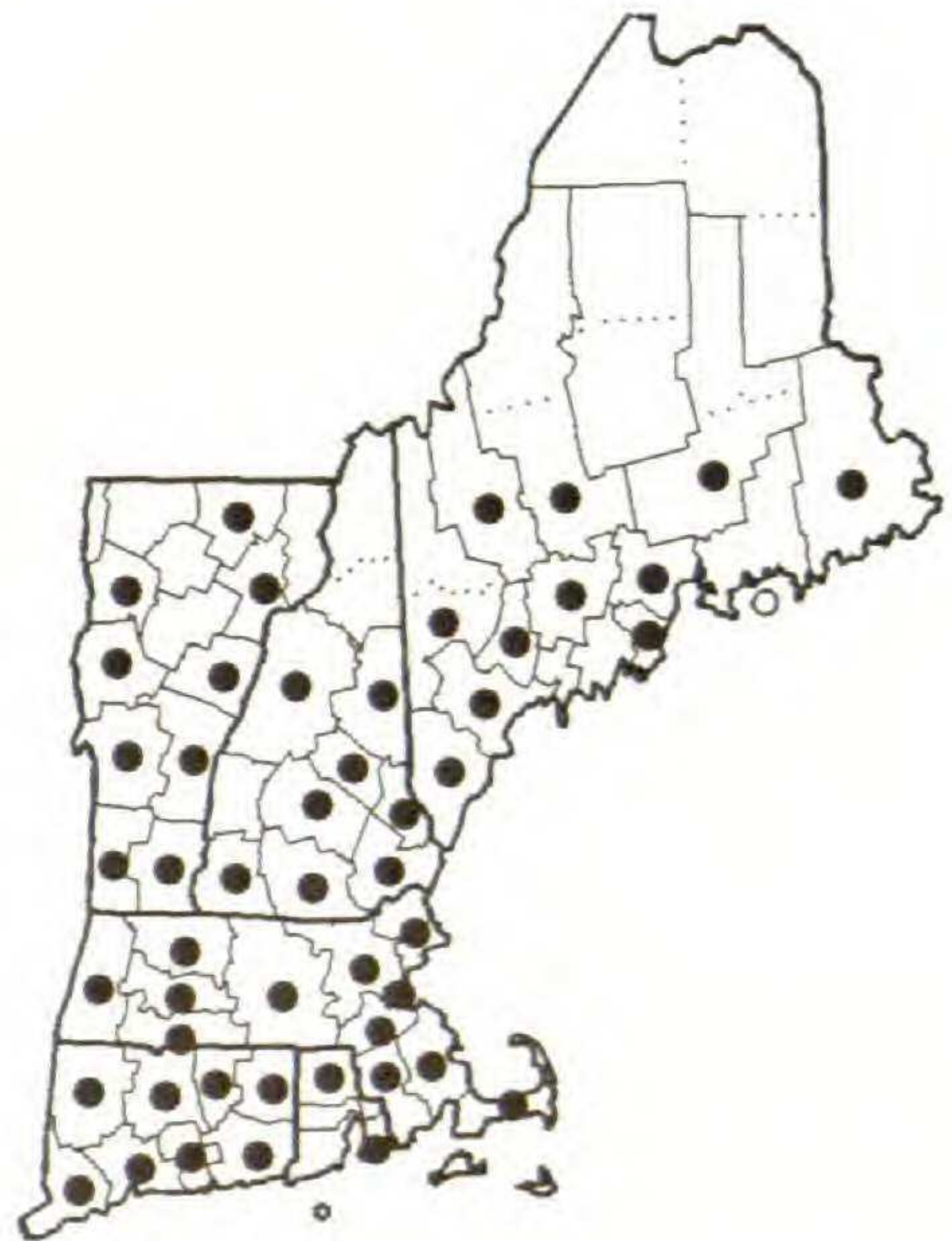
Panicum dichotomum
var. mattamuskeetense



Panicum flexile

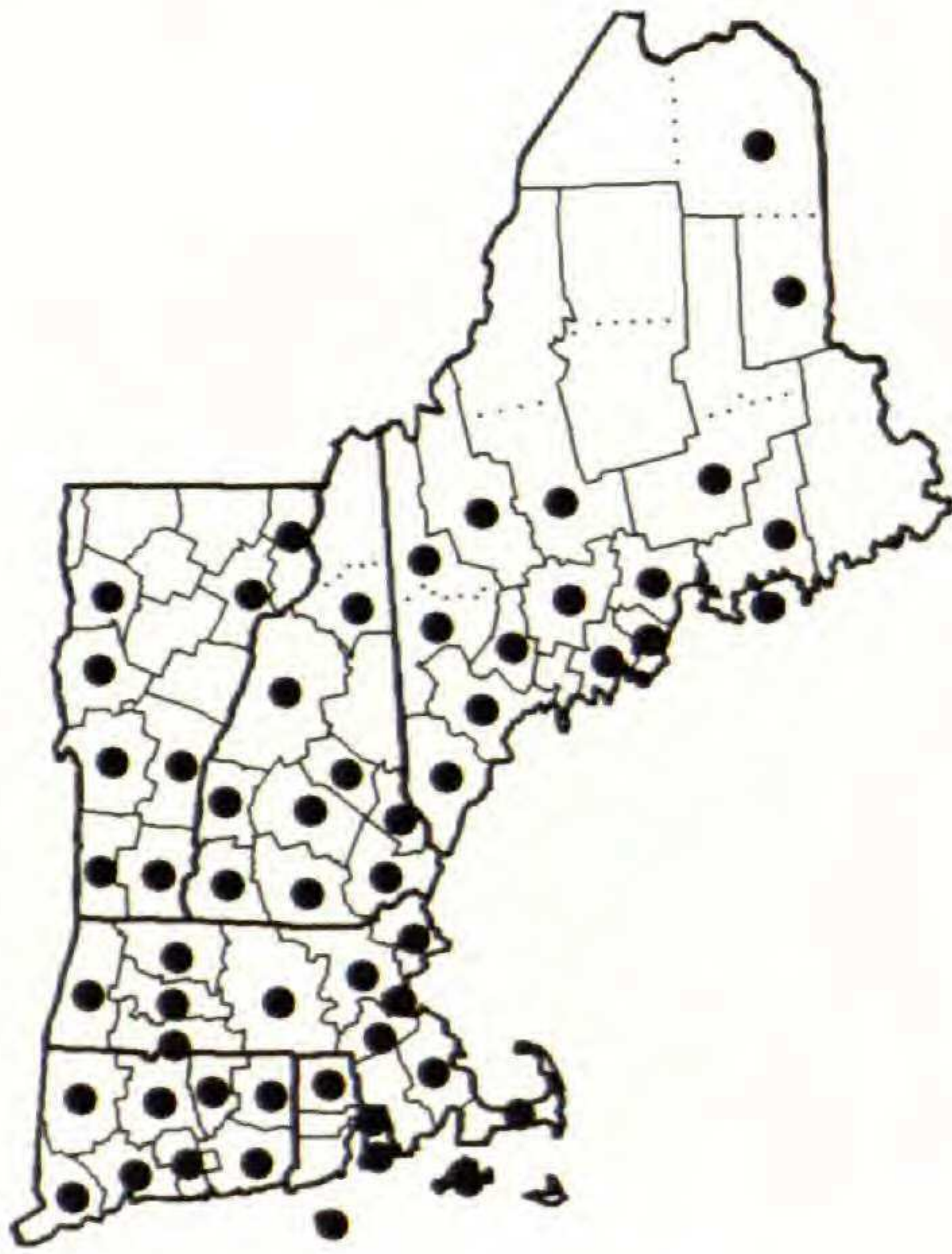
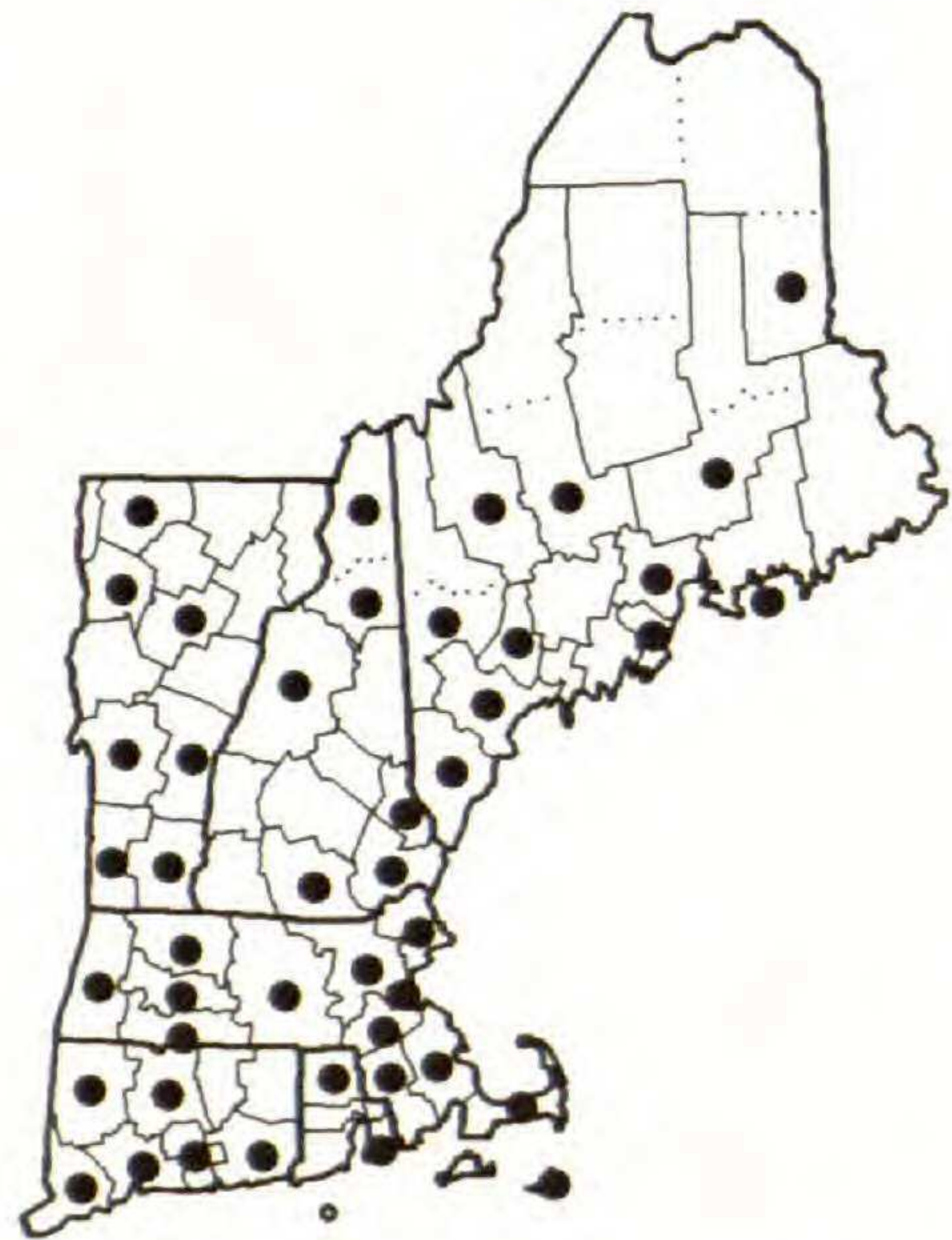


Panicum gattingeri



Panicum latifolium

Figure 58. Distribution maps for *Panicum dichotomum* var. *mattamuskeetense*, *P. flexile*, *P. gattingeri* and *P. latifolium*.

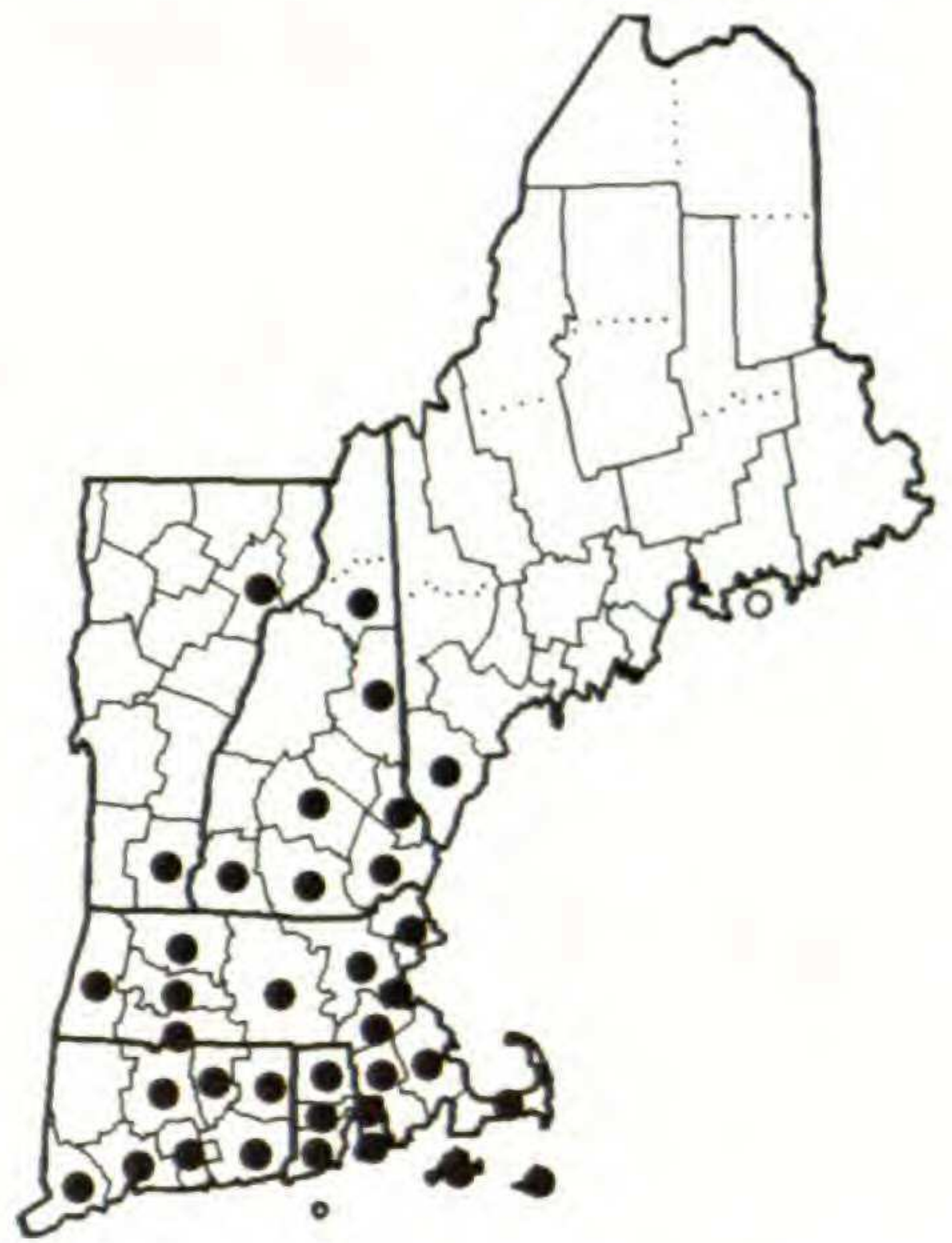
*Panicum linearifolium**Panicum meridionale**Panicum microcarpon*

PANICUM MILIACEUM

Figure 59. Distribution maps for *Panicum linearifolium*, *P. meridionale*, *P. microcarpon* and *P. MILIACEUM*.



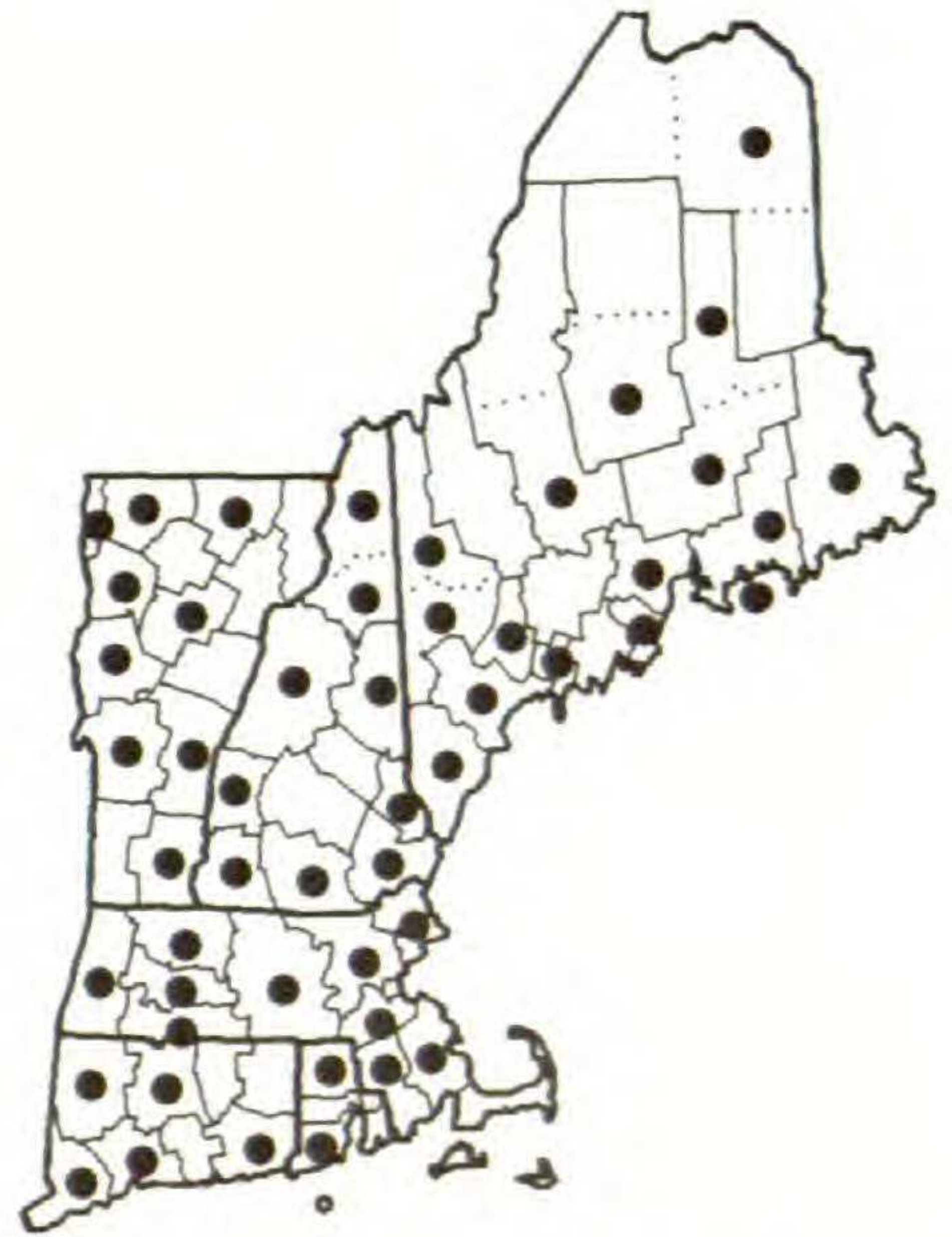
Panicum oligosanthos
var. *oligosanthos*



Panicum oligosanthos
var. *scribnerianum*



Panicum ovale
var. *pseudopubescens*



Panicum philadelphicum

Figure 60. Distribution maps for *Panicum oligosanthos* var. *oligosanthos*, *P. oligosanthos* var. *scribnerianum*, *P. ovale* var. *pseudopubescens* and *P. philadelphicum*.

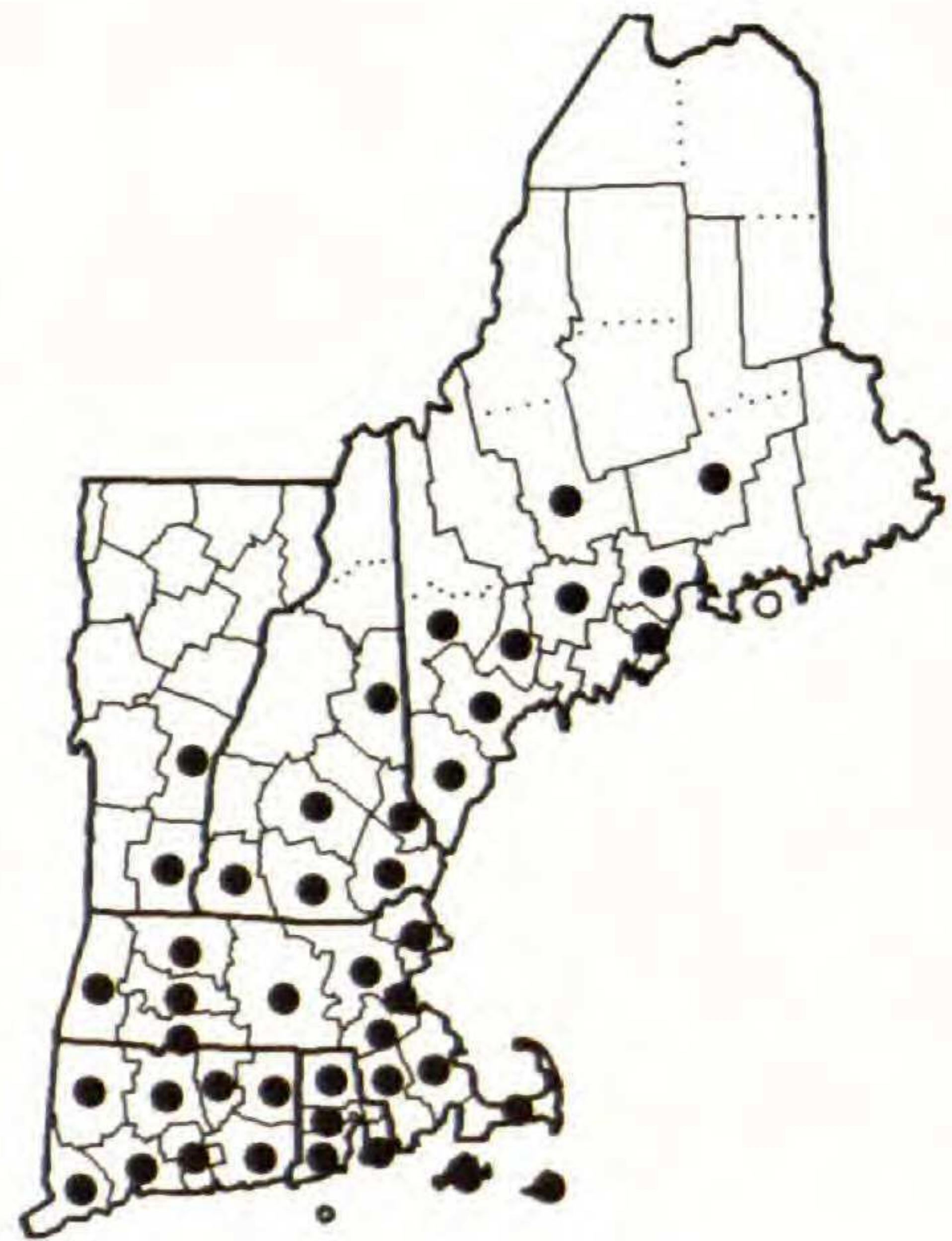
*Panicum polyanthes**Panicum rigidulum*
var. *rigidulum**Panicum rigidulum*
var. *elongatum**Panicum rigidulum*
var. *pubescens*

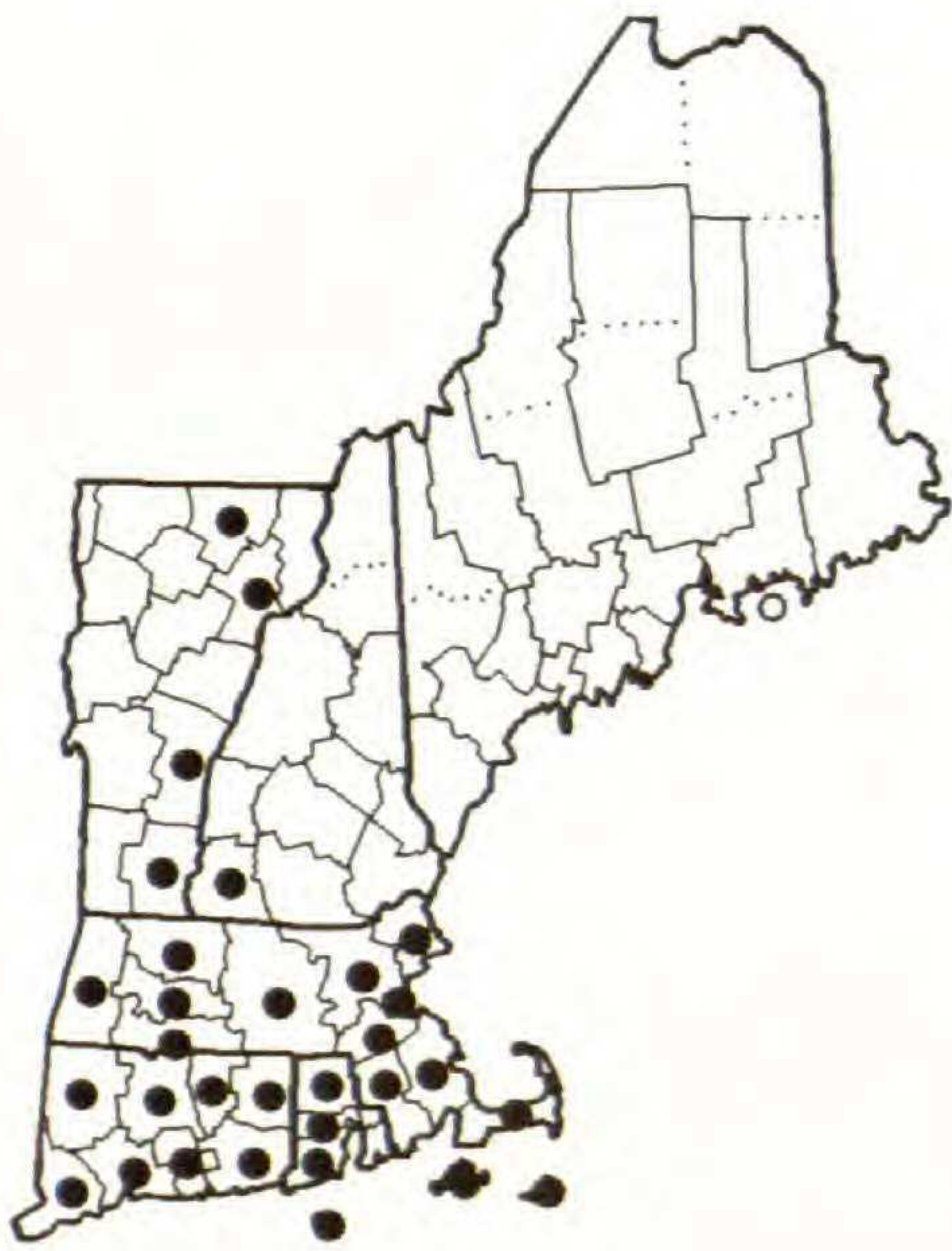
Figure 61. Distribution maps for *Panicum polyanthes*, *P. rigidulum* var. *rigidulum*, *P. rigidulum* var. *elongatum* and *P. rigidulum* var. *pubescens*.



Panicum scabriusculum



Panicum scoparium



Panicum sphaerocarpon



Panicum spretum

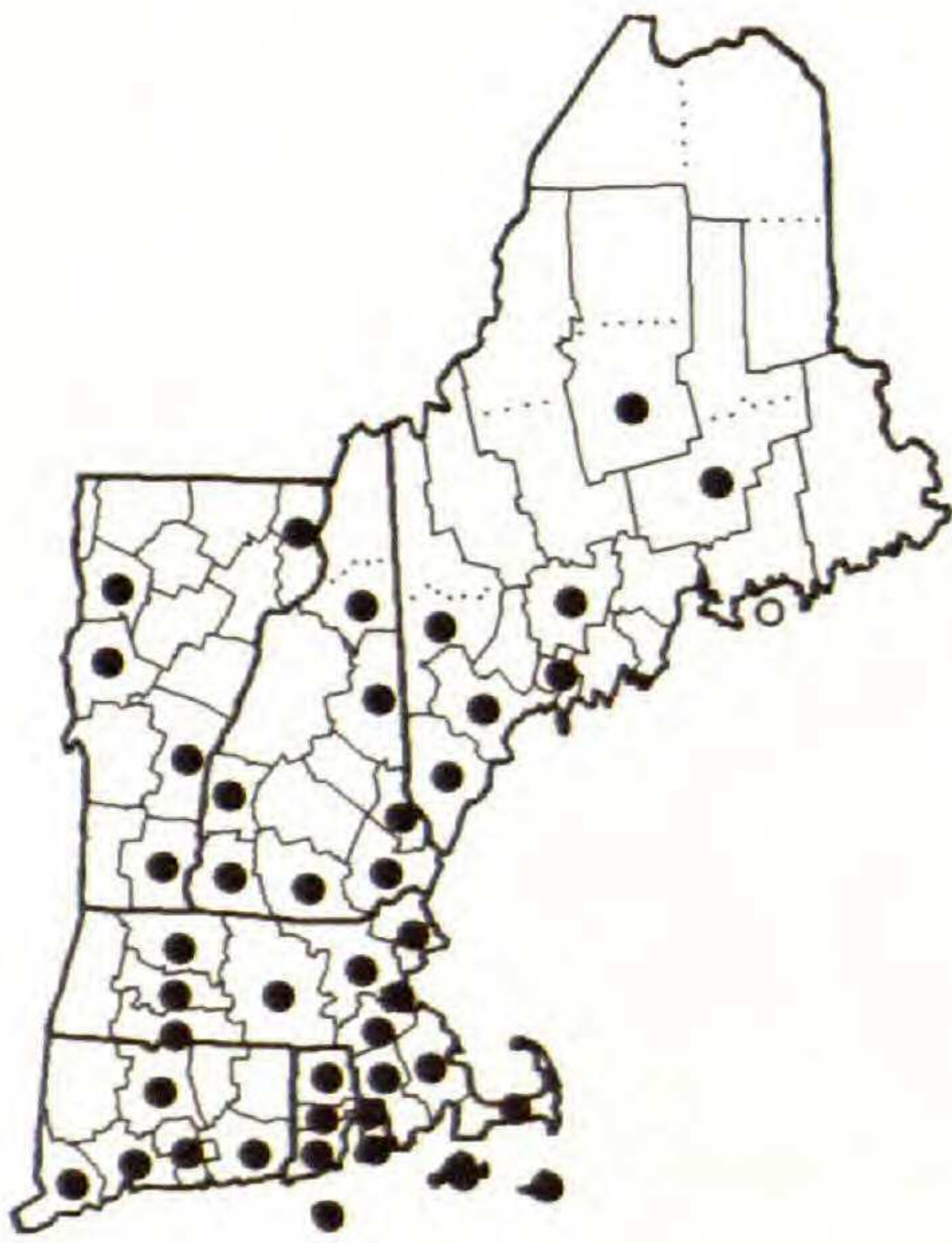
Figure 62. Distribution maps for *Panicum scabriusculum*, *P. scoparium*, *P. sphaerocarpon* and *P. spretum*.



Panicum verrucosum



Panicum villosissimum



Panicum virgatum



Panicum wrightianum

Figure 63. Distribution maps for *Panicum verrucosum*, *P. villosissimum*, *P. virgatum* and *P. wrightianum*.



Panicum xanthophysum



Panicum dichotomum x *P. latifolium*



Panicum x *scoparioides*



PAPPOPHORUM VAGINATUM

Figure 64. Distribution maps for *Panicum xanthophysum*, *P. dichotomum* x *P. latifolium*, *P. x scoparioides* and PAPPOPHORUM VAGINATUM.



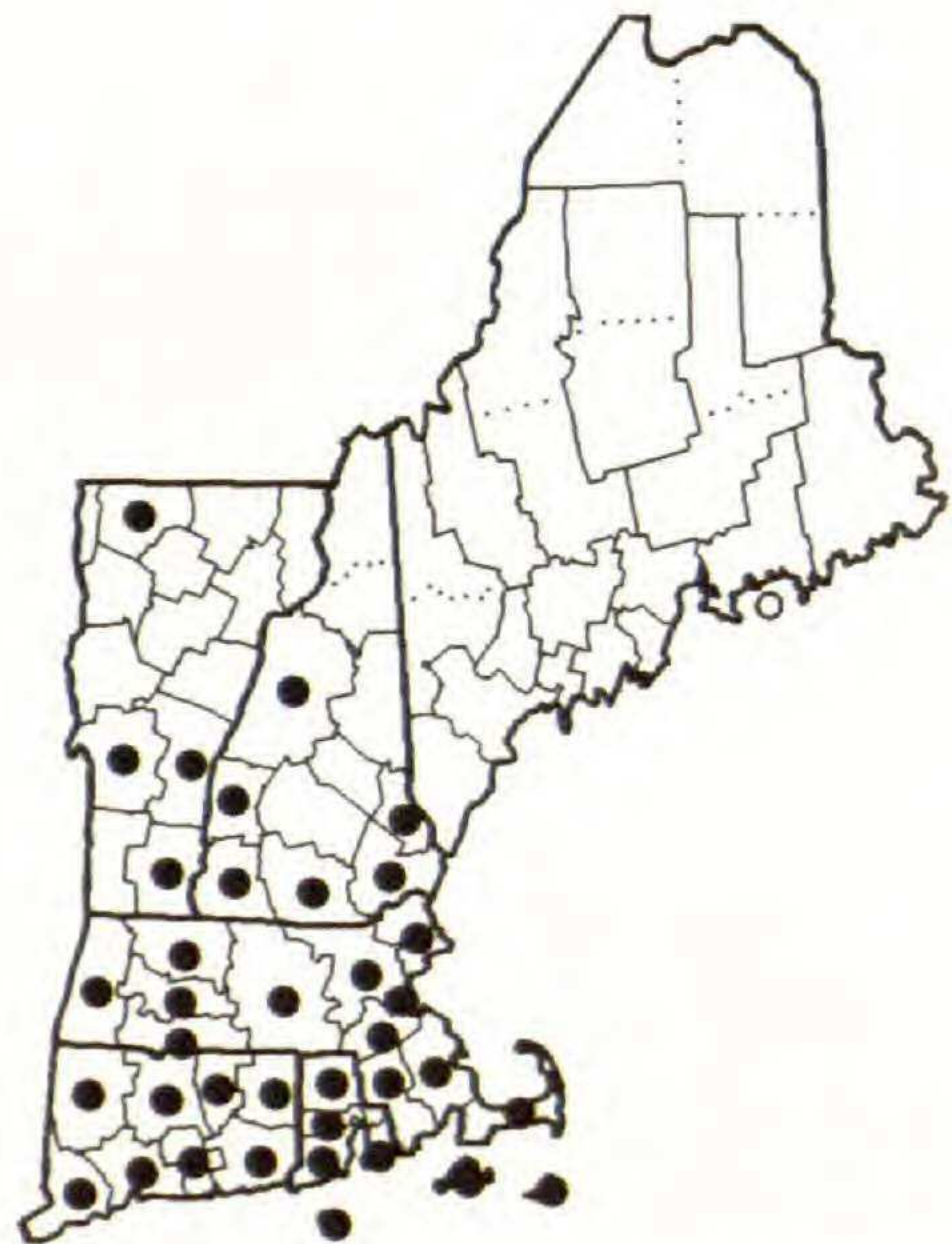
PASCOPYRUM SMITHII



Paspalum laeve



Paspalum setaceum
var. *setaceum*

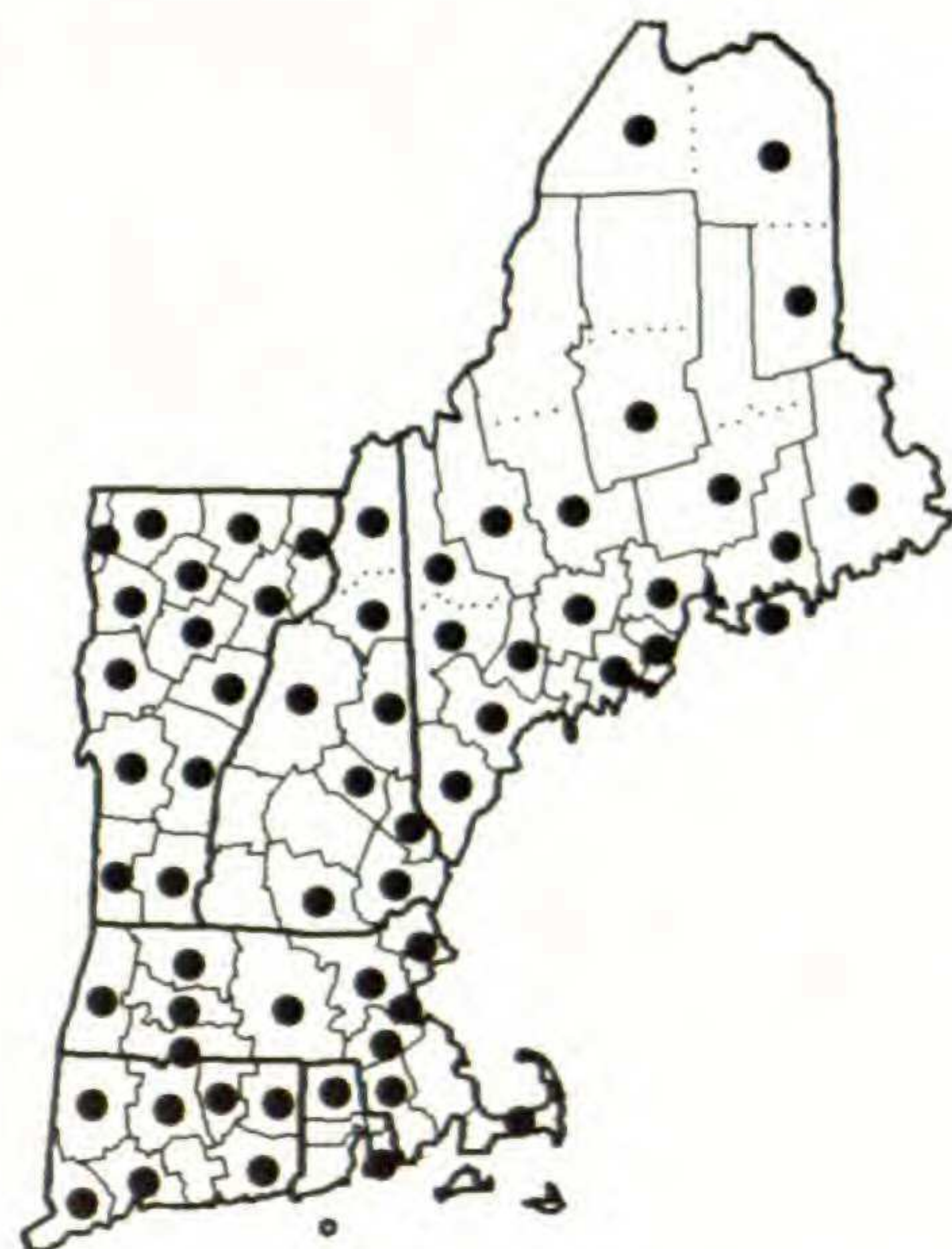


Paspalum setaceum
var. *muhlenbergii*

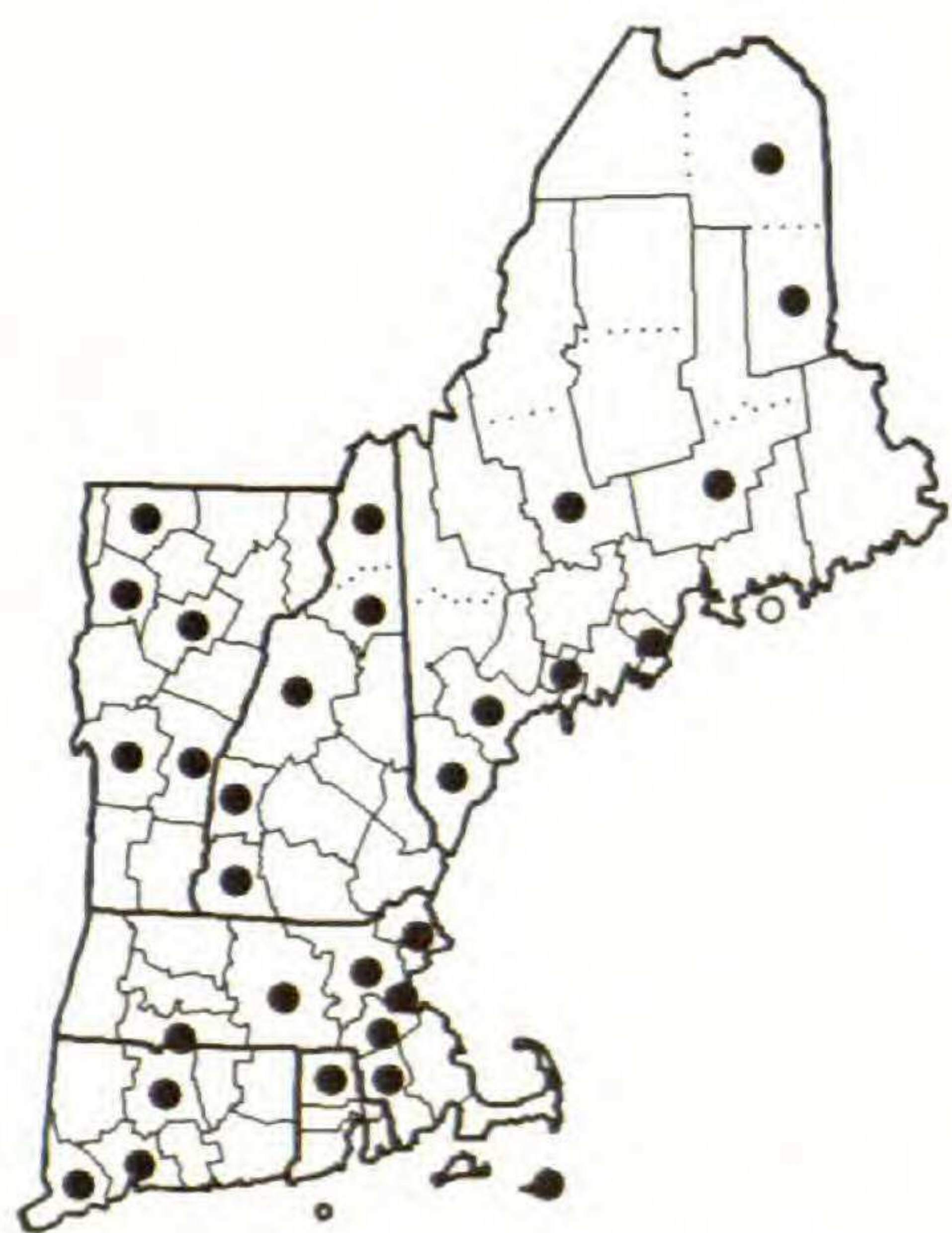
Figure 65. Distribution maps for *PASCOPYRUM SMITHII*, *Paspalum laeve*, *P. setaceum* var. *setaceum* and *P. setaceum* var. *muhlenbergii*.



Paspalum setaceum
var. *psammophilum*



Phalaris arundinacea



PHALARIS CANARIENSIS



Phleum alpinum

Figure 66. Distribution maps for *Paspalum setaceum* var. *psammophilum*, *Phalaris arundinacea*, *P. CANARIENSIS* and *Phleum alpinum*.

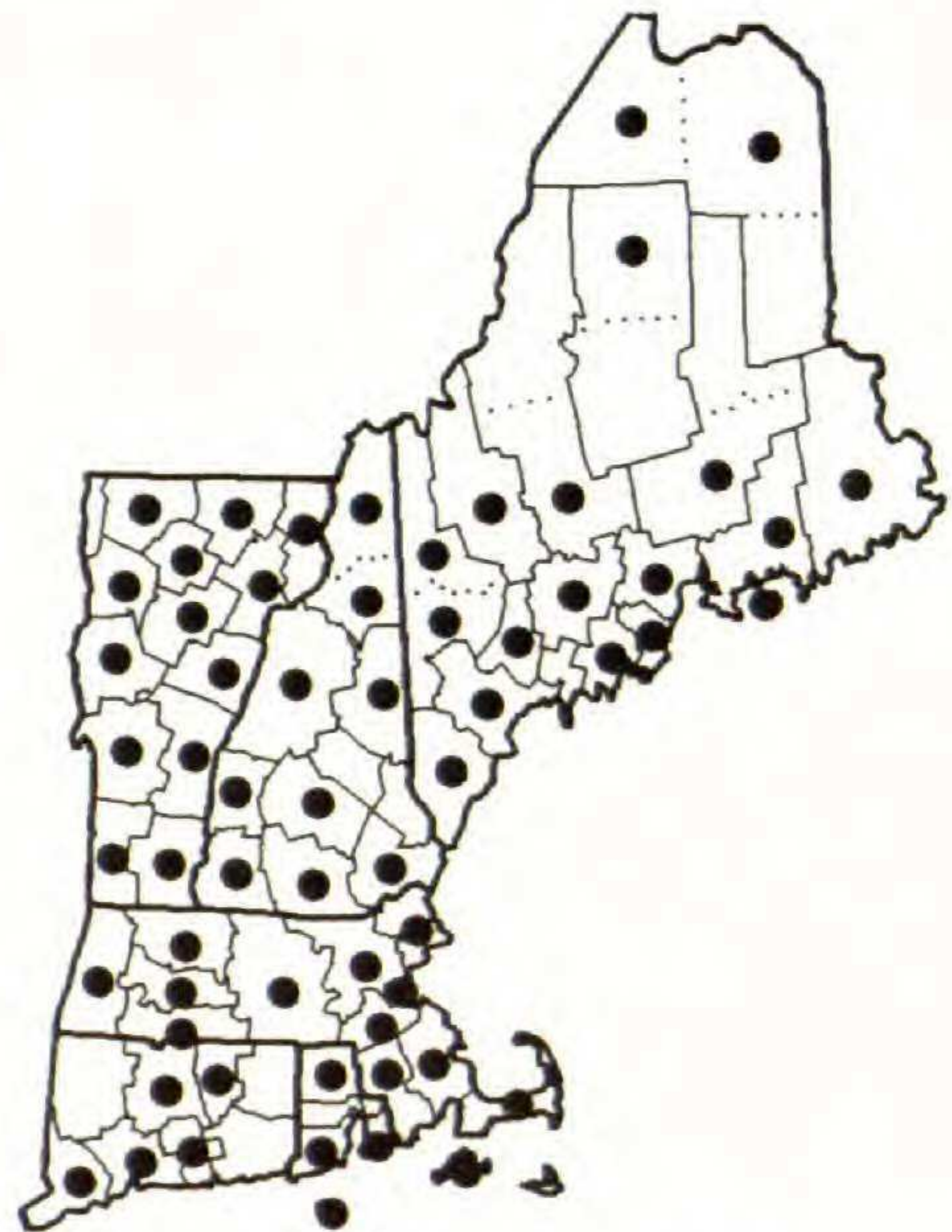
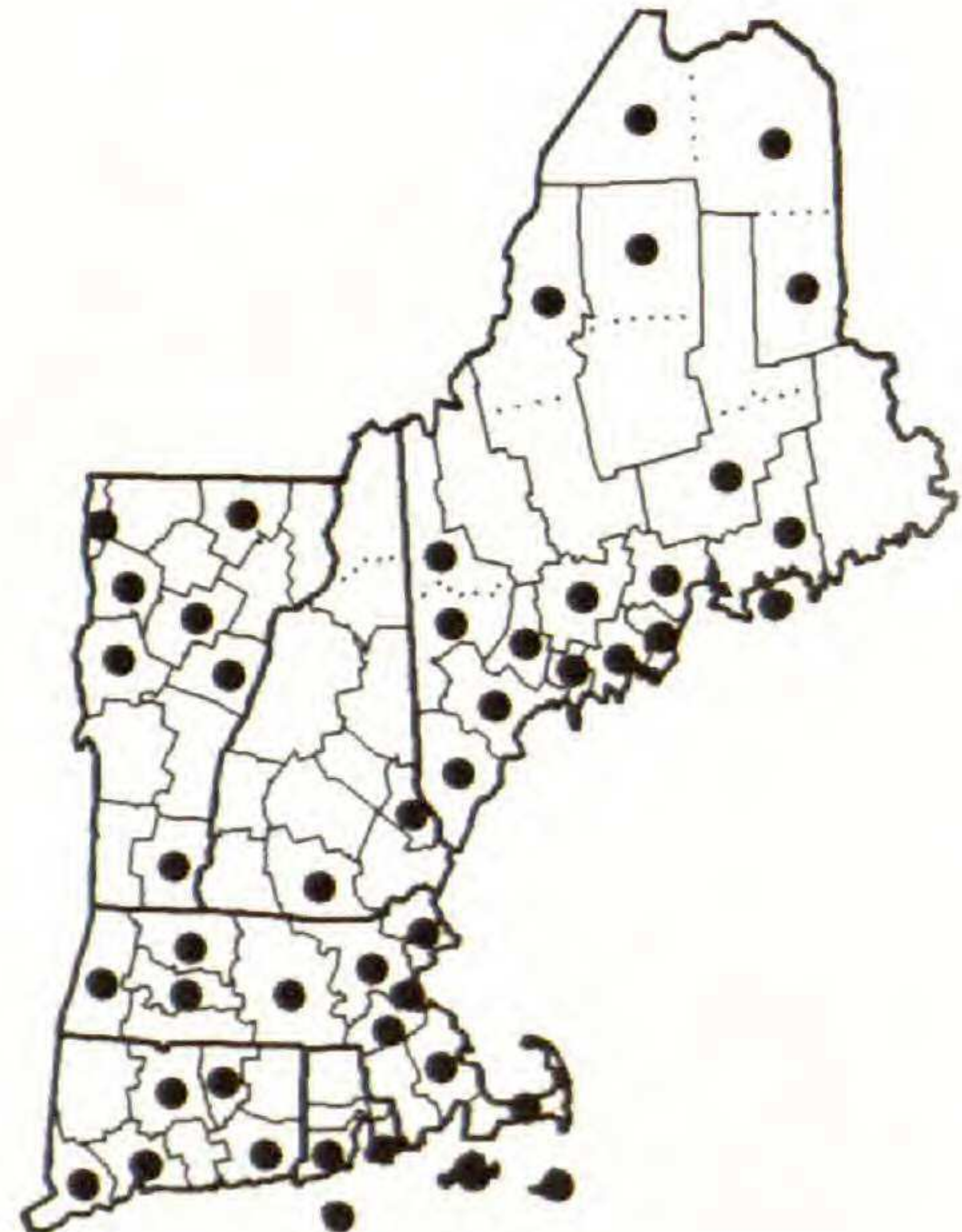
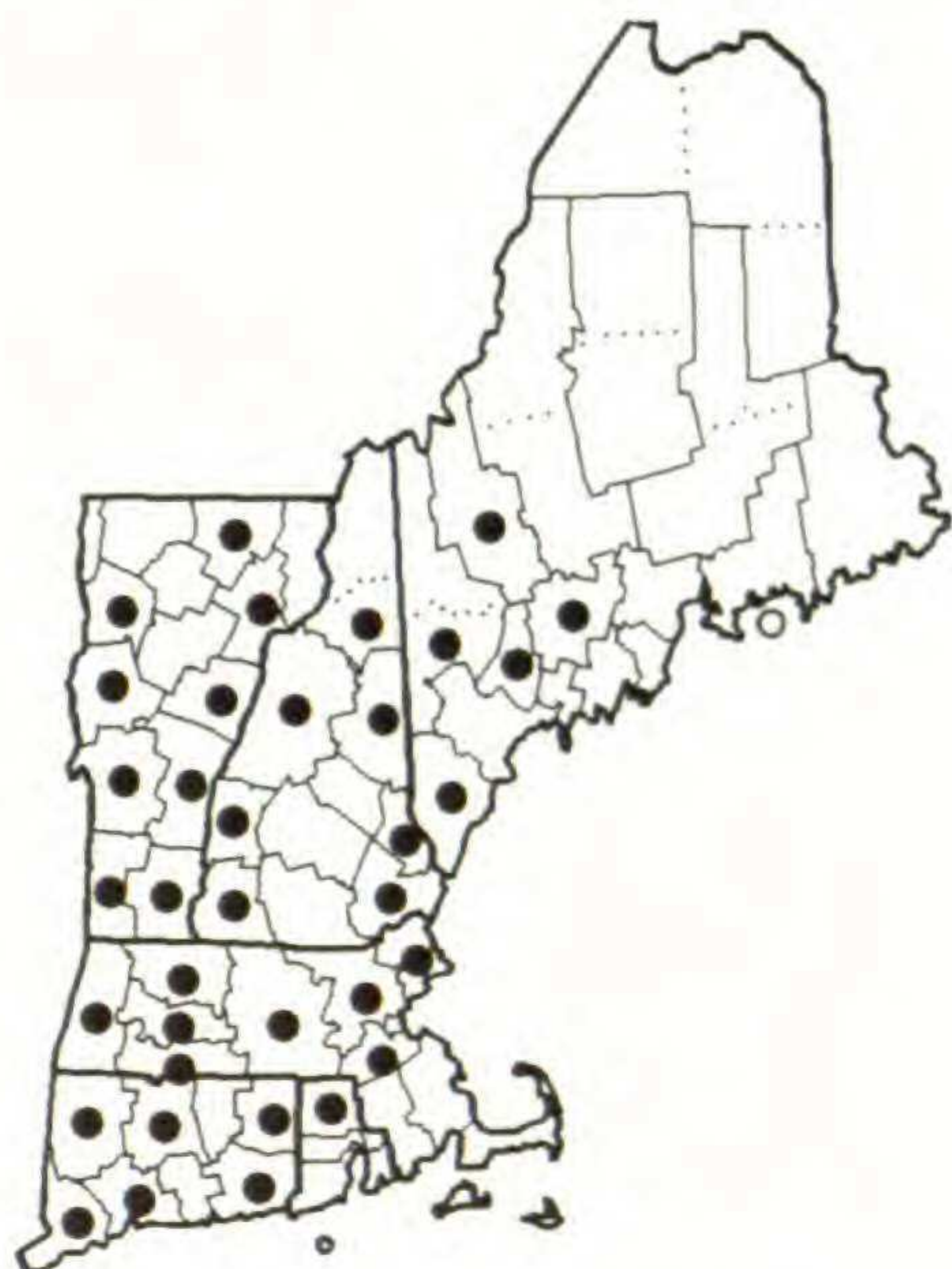
*PHLEUM ARENARIUM**PHLEUM PRATENSE**PHLEUM SUBULATUM**Phragmites australis*

Figure 67. Distribution maps for *PHLEUM ARENARIUM*, *P. PRATENSE*, *P. SUBULATUM* and *Phragmites australis*.



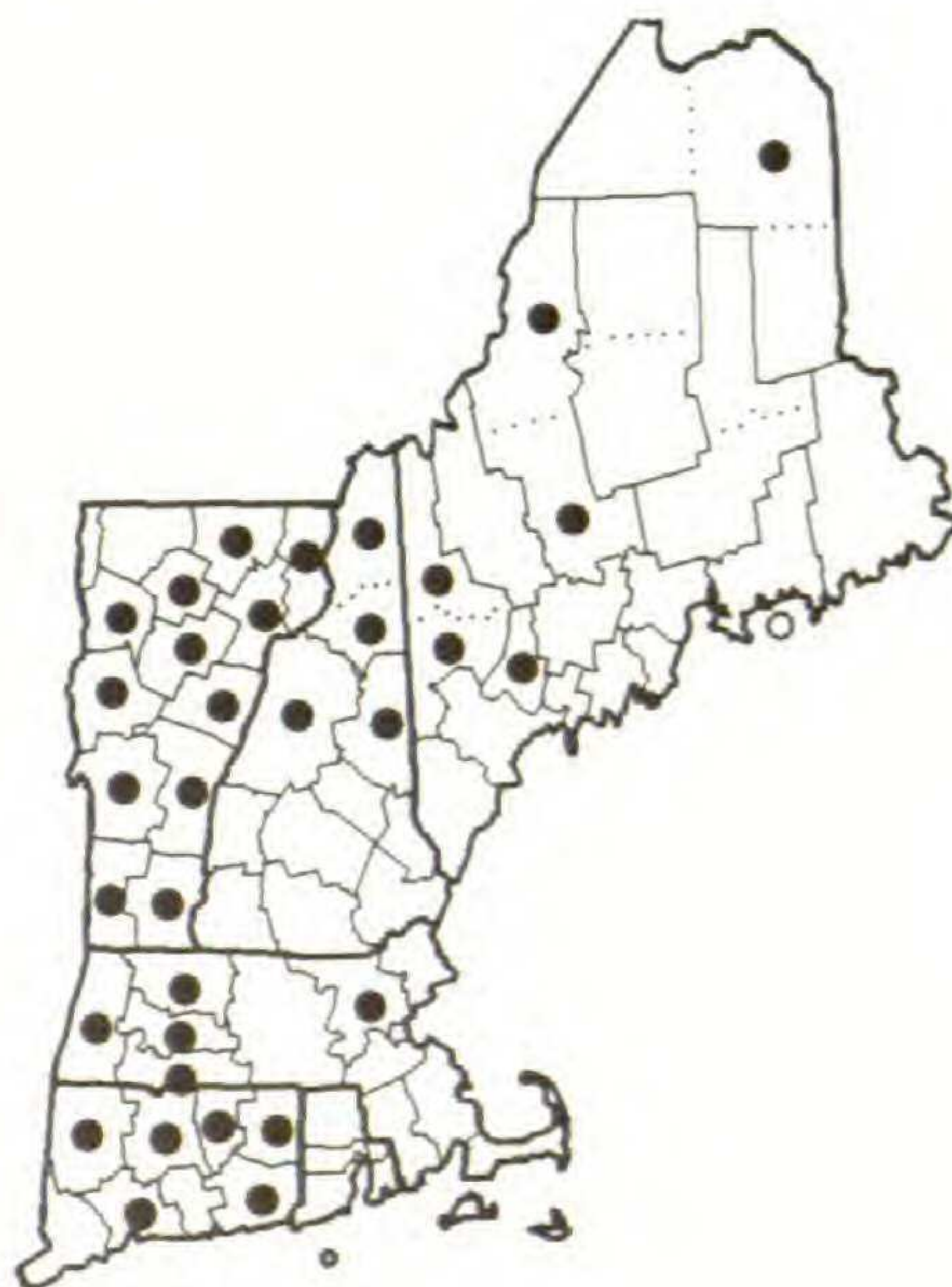
PHYLLOSTACHYS DULCIS



Piptatherum racemosum



Piptochaetium avenaceum



Poa alsodes

Figure 68. Distribution maps for *PHYLLOSTACHYS DULCIS*, *Piptatherum racemosum*, *Piptochaetium avenaceum* and *Poa alsodes*.

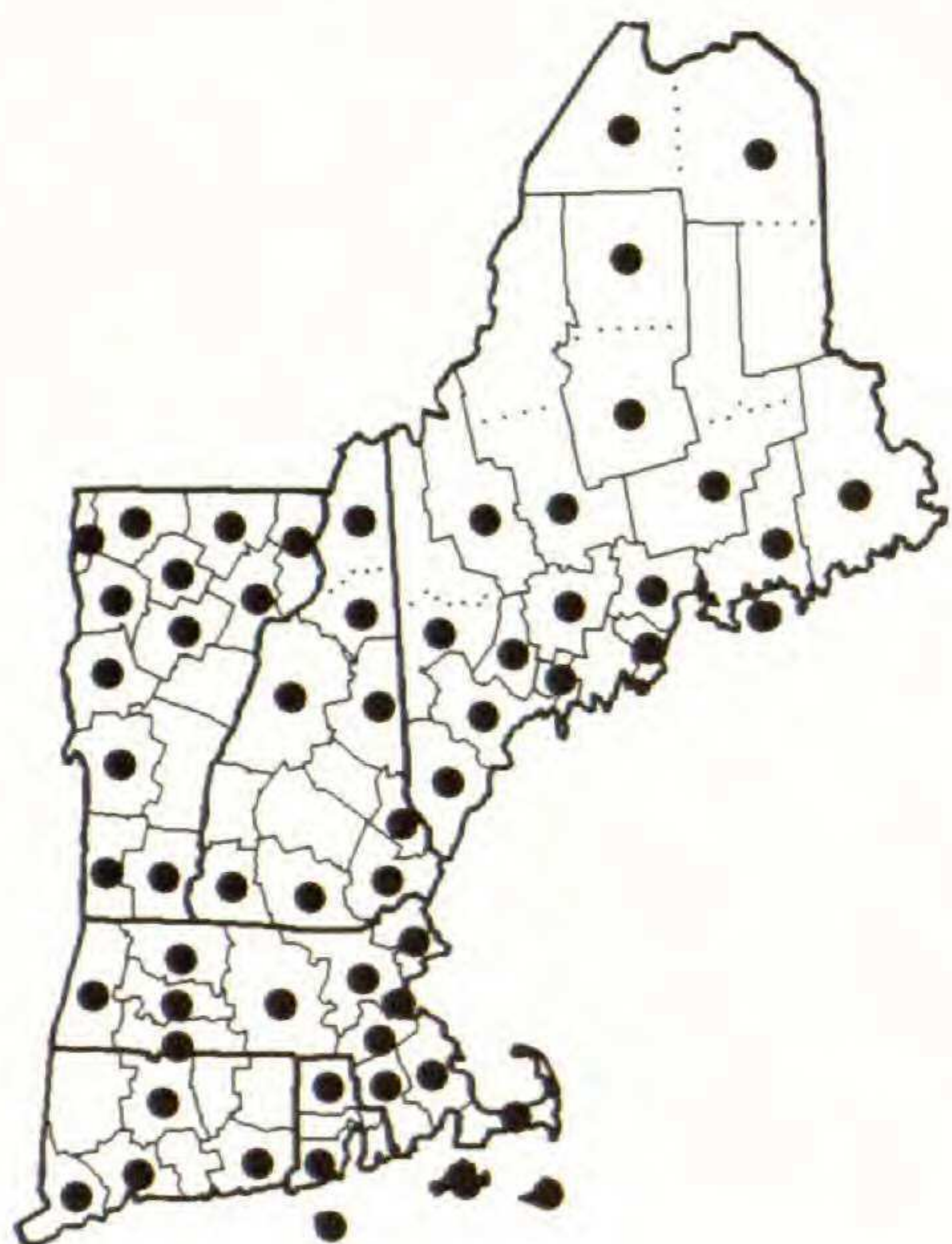
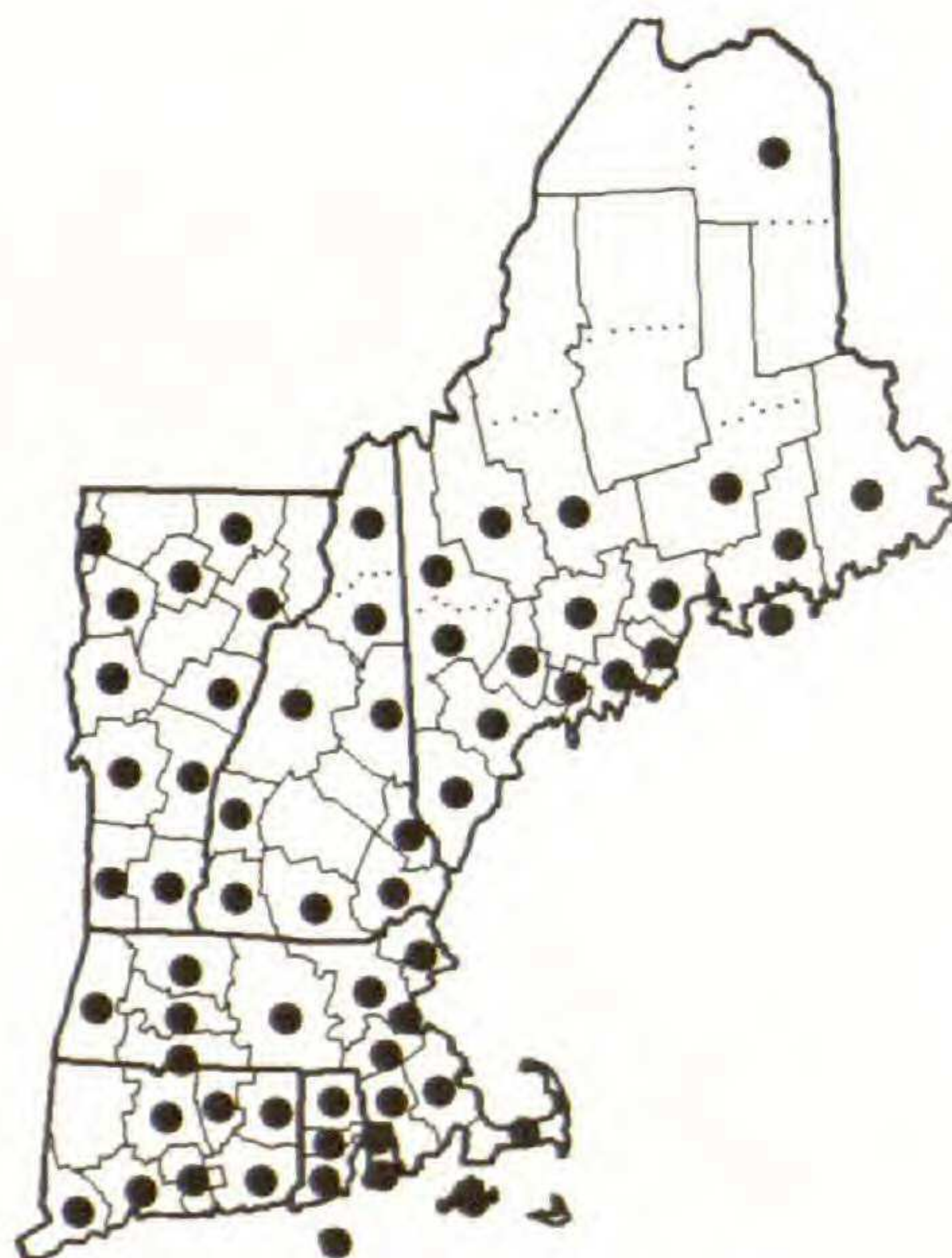
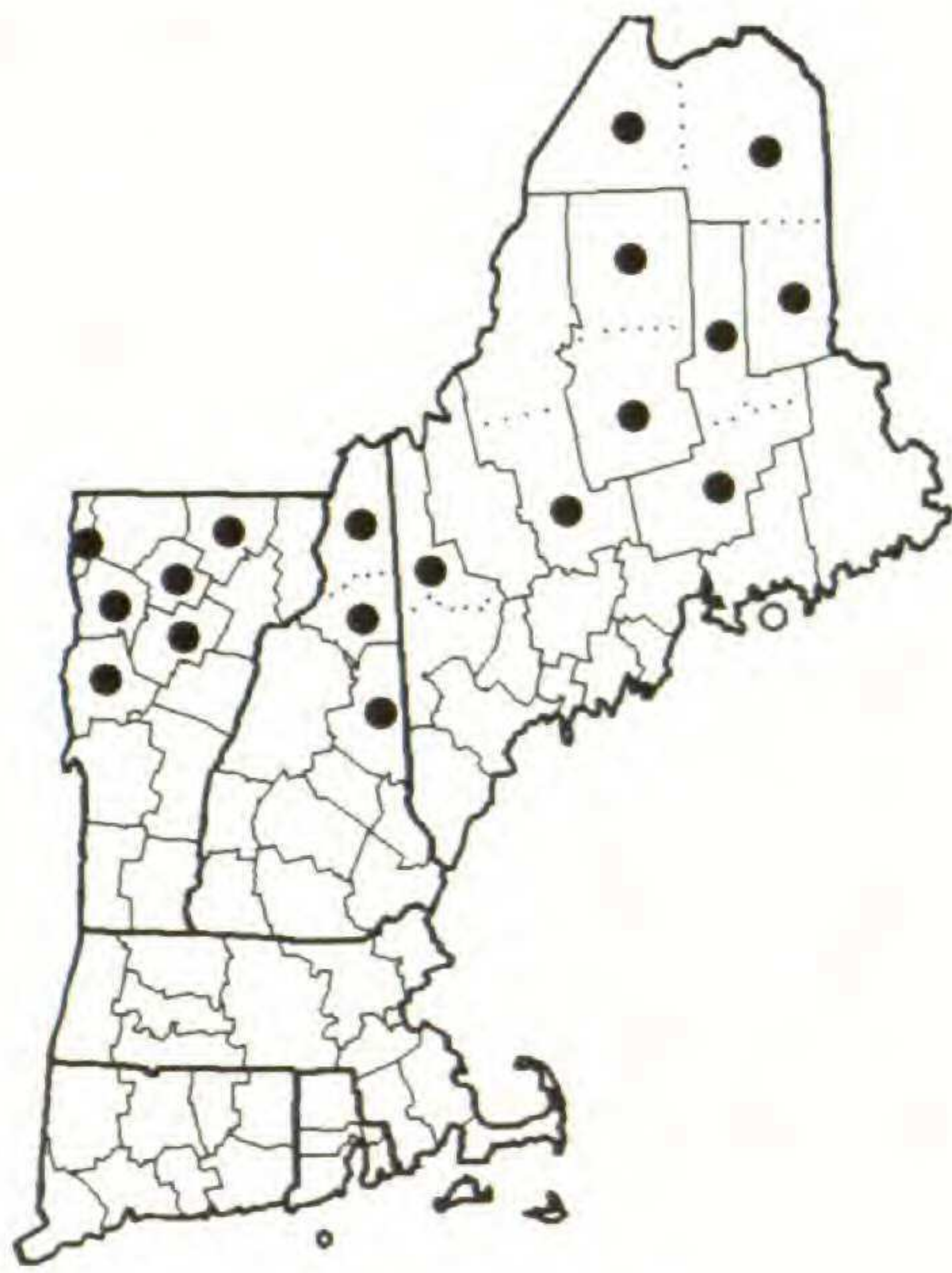
*POA ANNUA**POA BULBOSA**POA CHAPMANIANA**POA COMPRESSA*

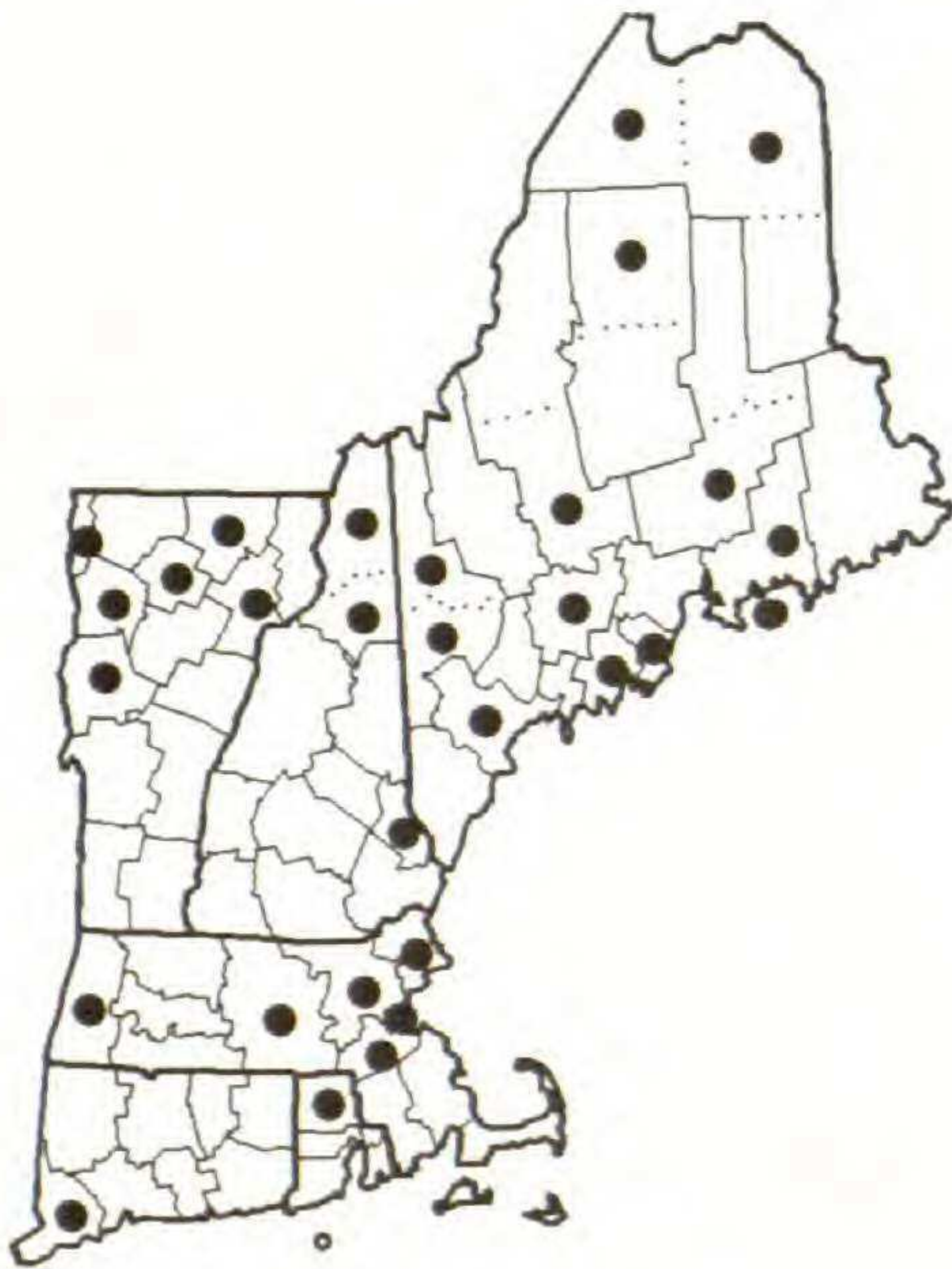
Figure 69. Distribution maps for *POA ANNUA*, *P. BULBOSA*, *P. CHAPMANIANA* and *P. COMPRESSA*.



Poa glauca



Poa laxa
subsp. *fernalidiana*

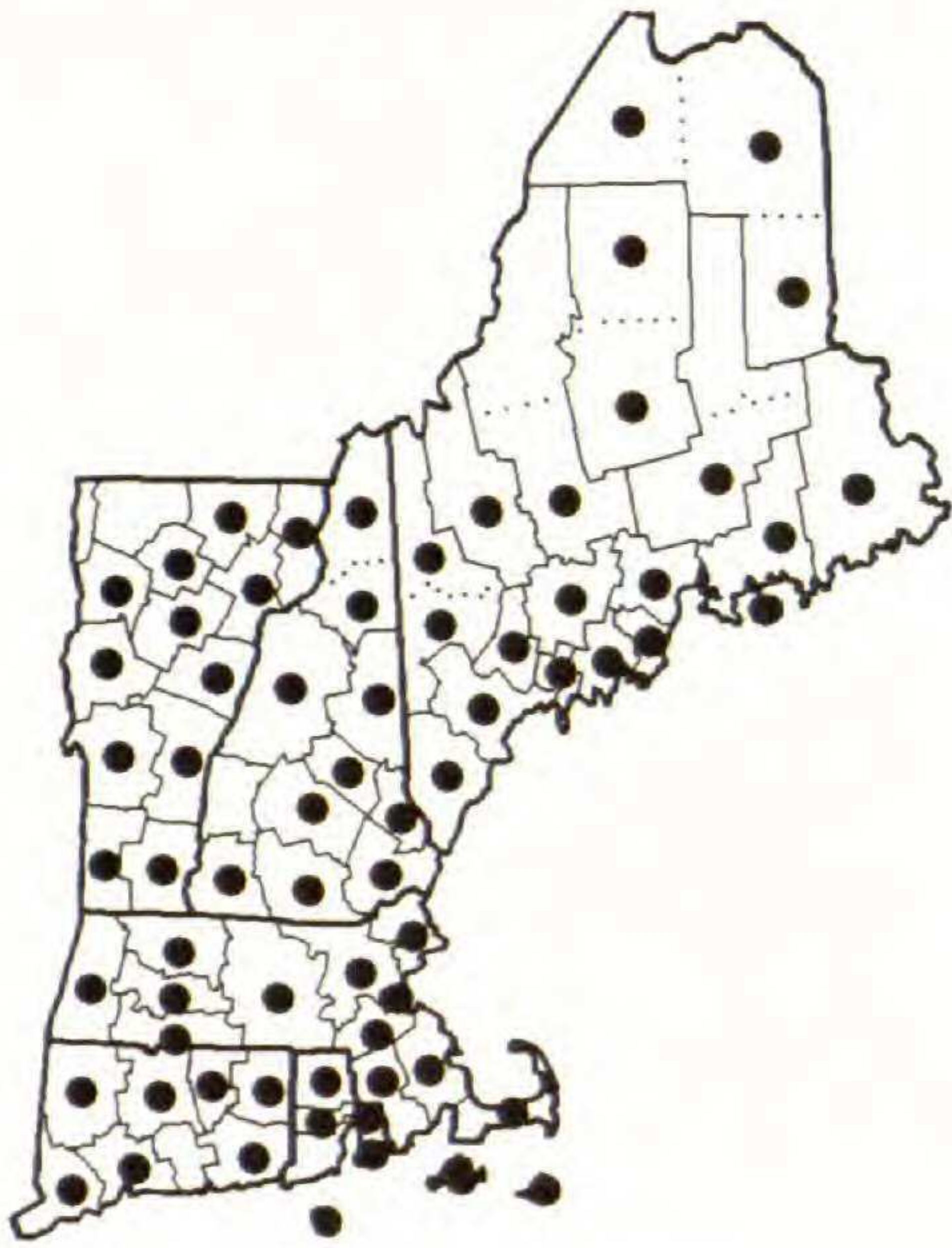


POA NEMORALIS
subsp. *NEMORALIS*



Poa palustris

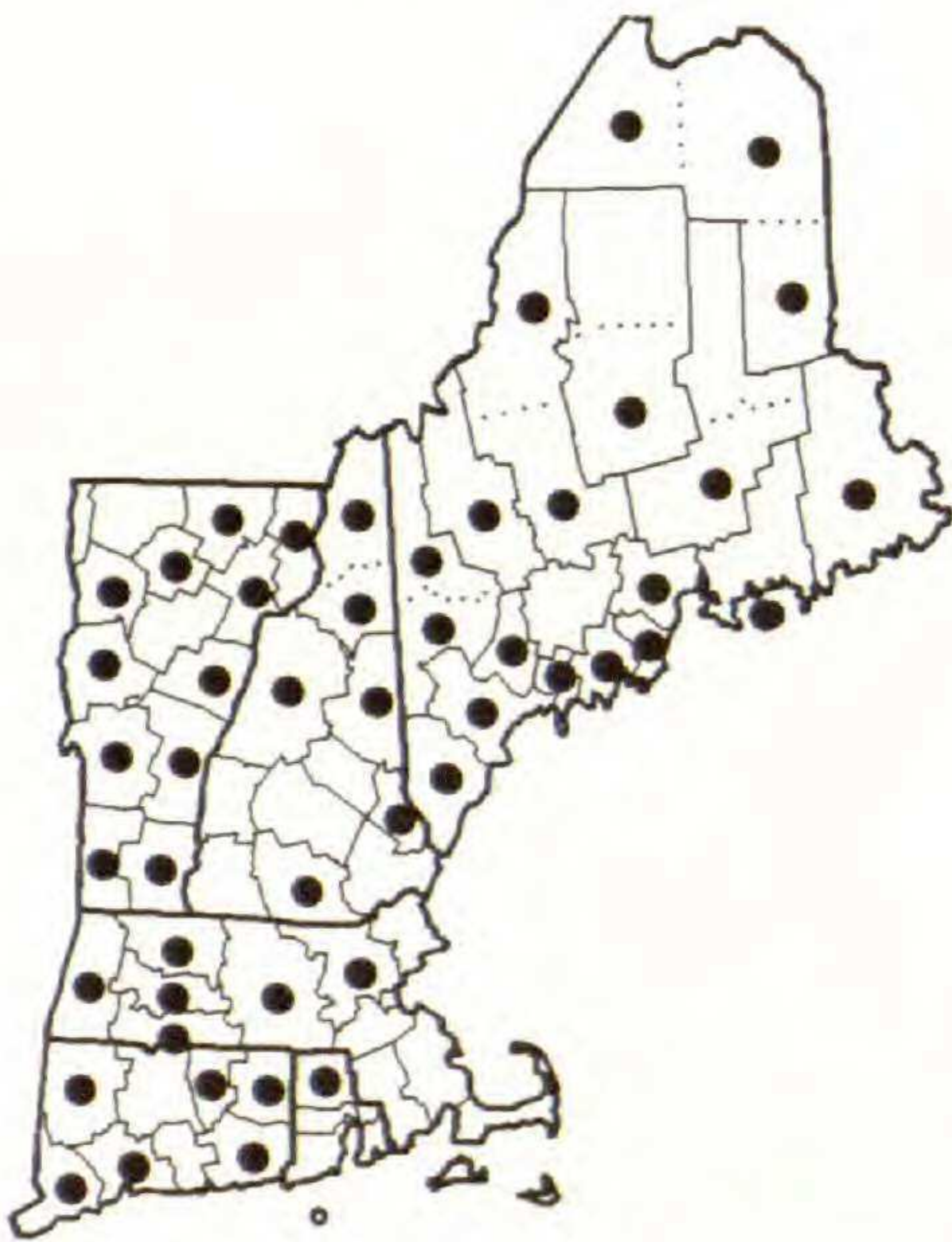
Figure 70. Distribution maps for *Poa glauca*, *P. laxa* subsp. *fernalidiana*, *P. NEMORALIS* subsp. *NEMORALIS* and *P. palustris*.



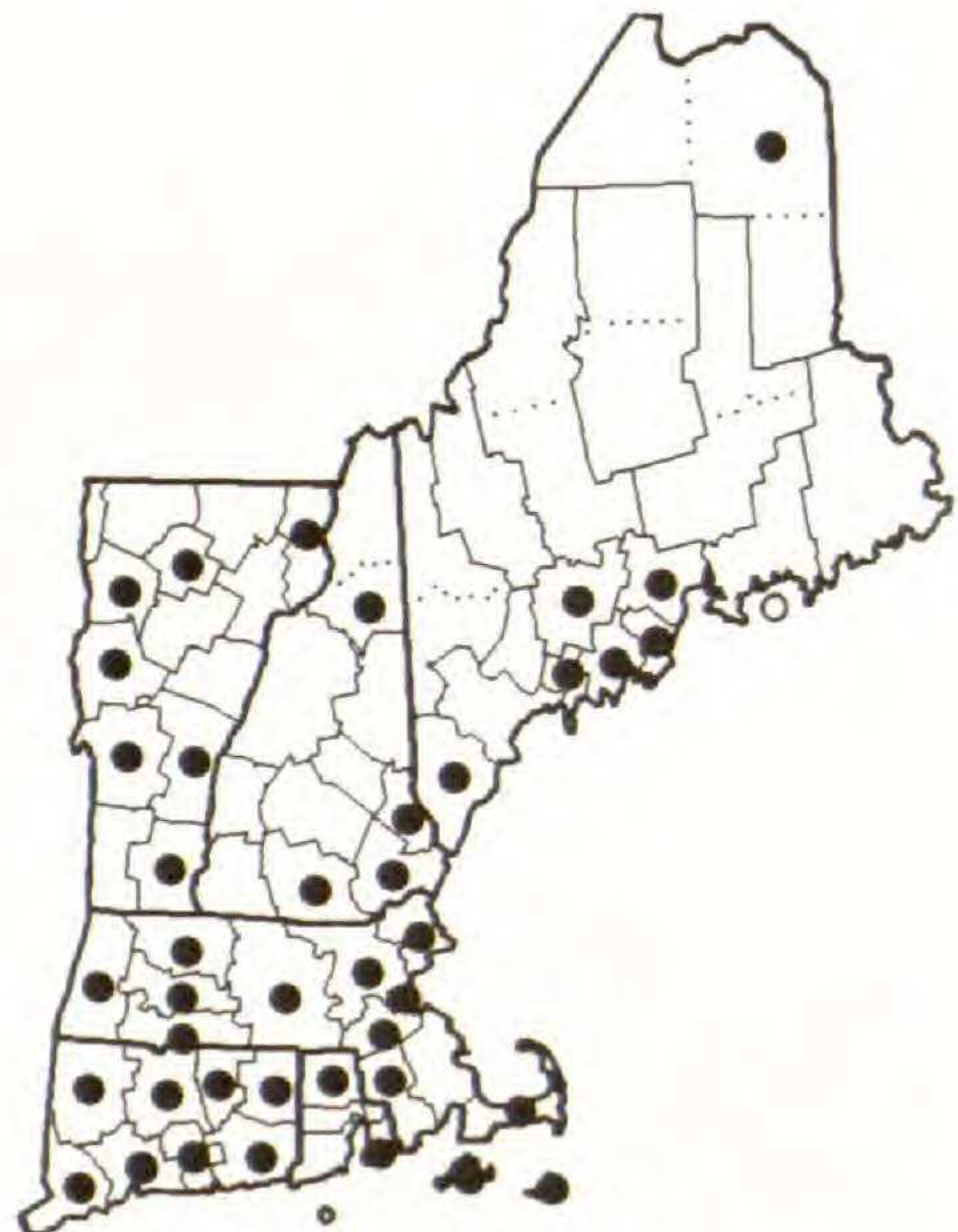
POA PRATENSIS
subsp. *PRATENSIS*



Poa pratensis
subsp. *alpigena*



Poa saltuensis

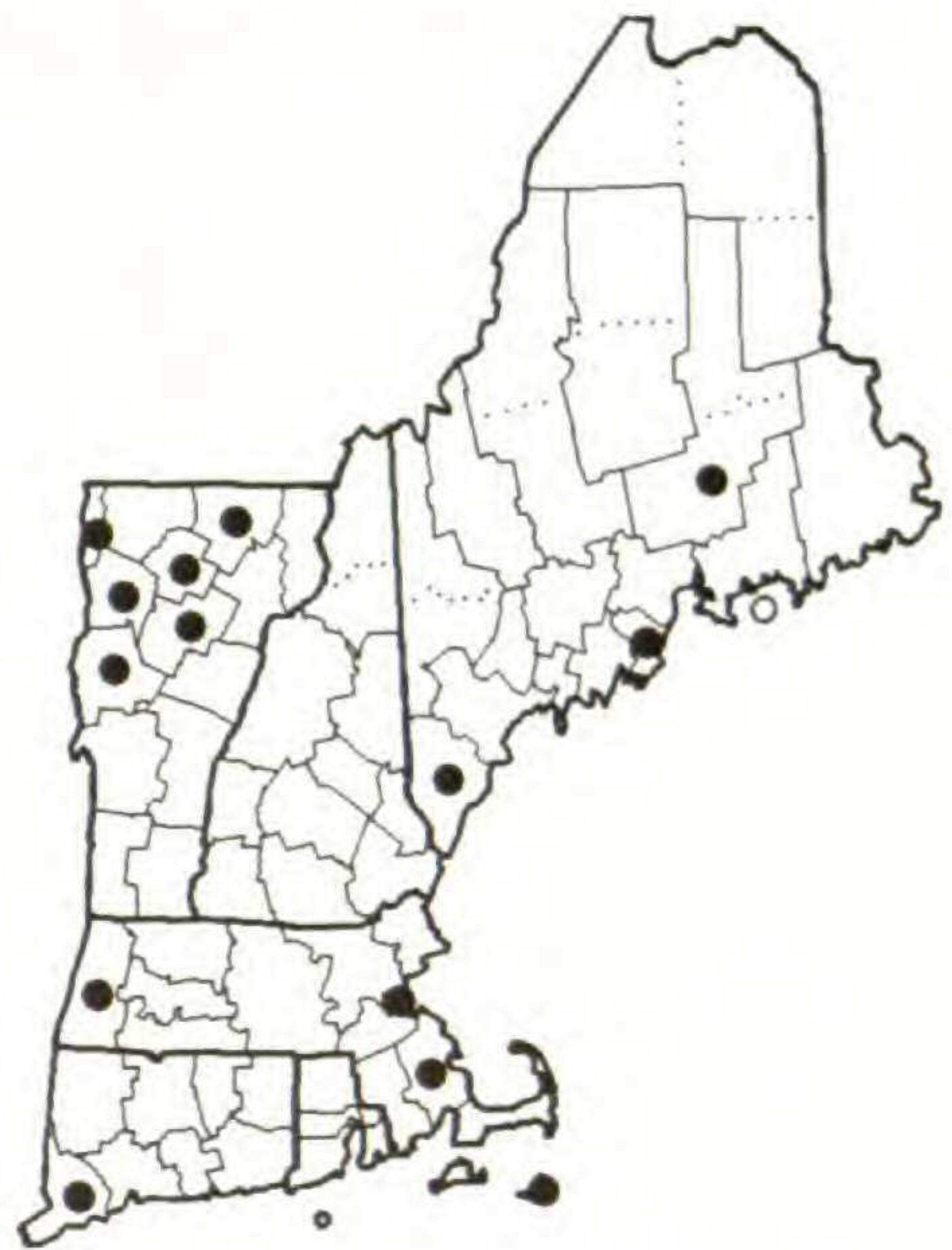


POA TRIVIALIS

Figure 71. Distribution maps for *POA PRATENSIS* subsp. *PRATENSIS*, *P. pratensis* subsp. *alpigena*, *P. saltuensis* and *P. TRIVIALIS*.



POLYPOGON MONSPELIENSIS



PUCCINELLIA DISTANS
subsp. *DISTANS*



PUCCINELLIA DISTANS
subsp. *BOREALIS*



Puccinellia fasciculata

Figure 72. Distribution maps for *POLYPOGON MONSPELIENSIS*, *PUC-CINELLIA DISTANS* subsp. *DISTANS*, *P. DISTANS* subsp. *BOREALIS* and *P. fasciculata*.



Puccinellia laurentiana



Puccinellia maritima

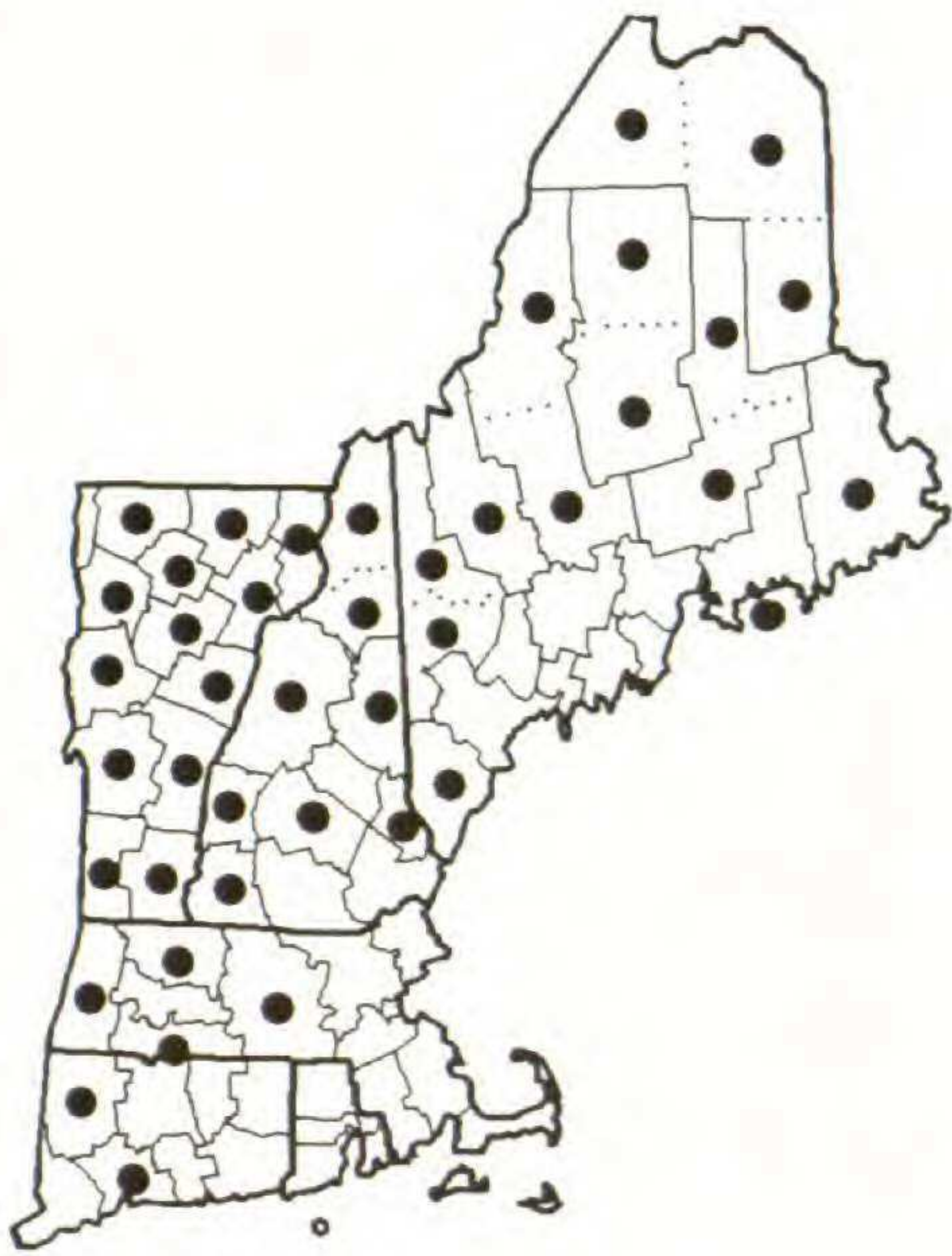


Puccinellia nuttalliana



Puccinellia tenella
subsp. *alaskana*

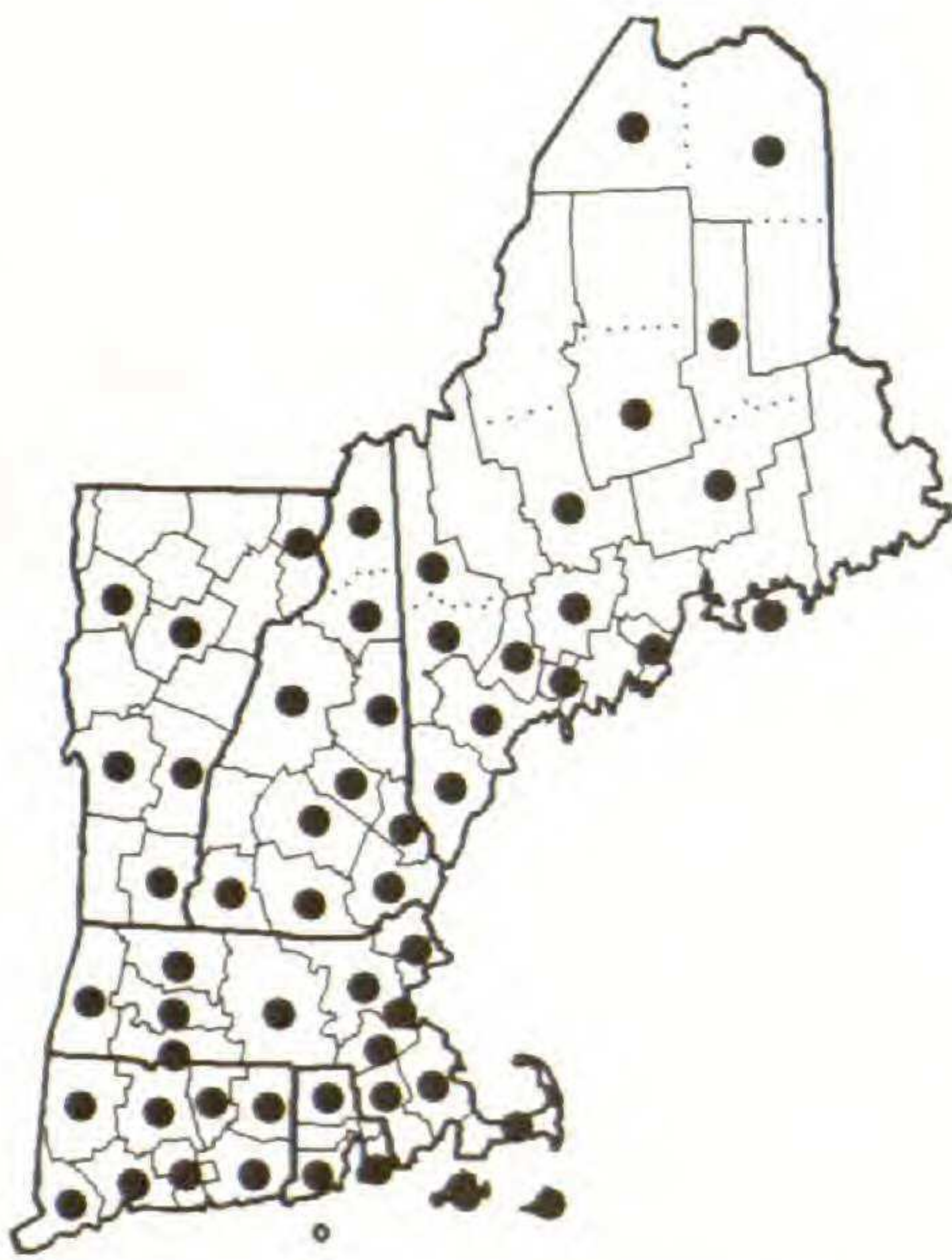
Figure 73. Distribution maps for *Puccinellia laurentiana*, *P. maritima*, *P. NUTTALLIANA* and *P. tenella* subsp. *alaskana*.



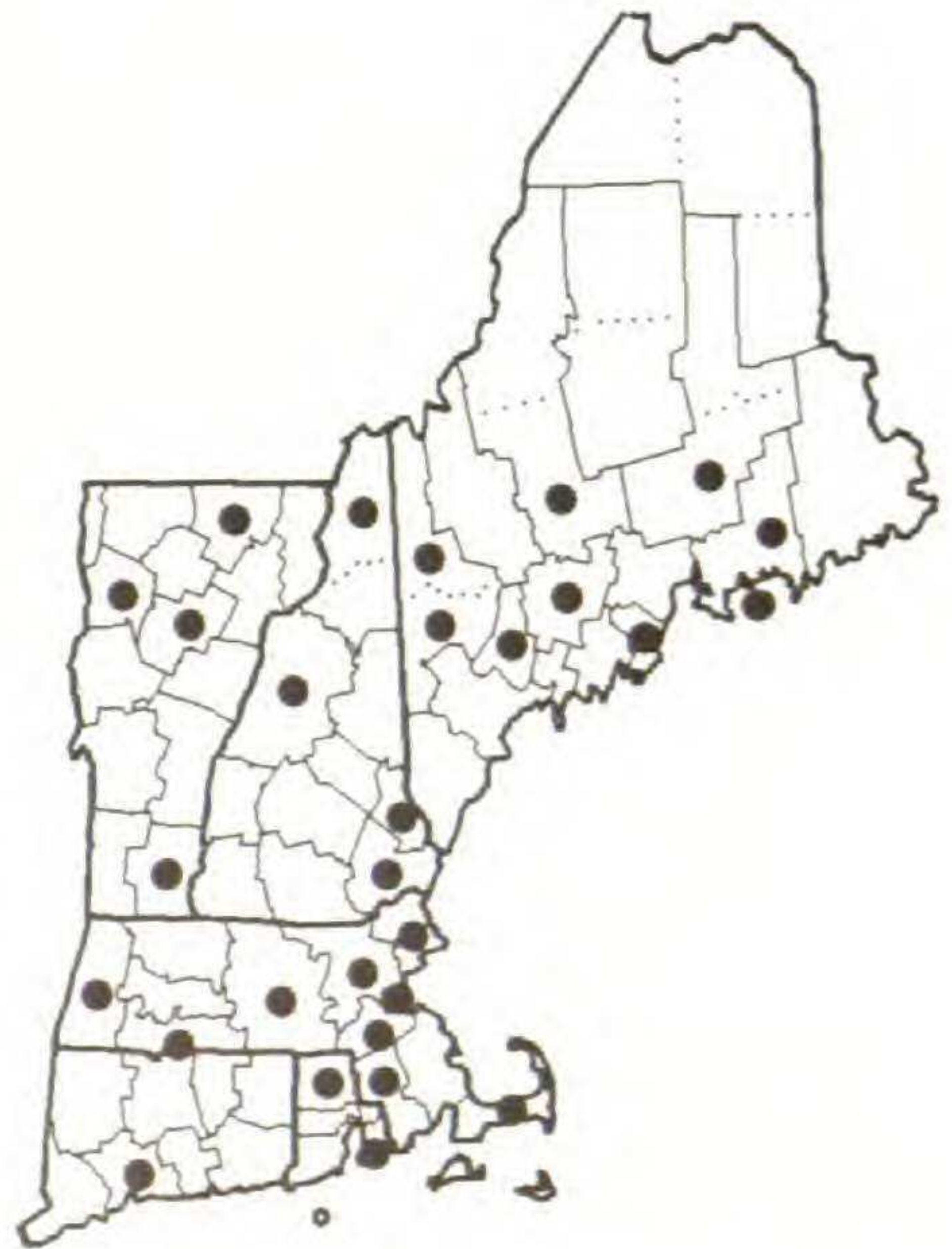
Schizachne purpurascens



Schizachyrium littorale



Schizachyrium scoparium



SECALE CEREALE

Figure 74. Distribution maps for *Schizachne purpurascens*, *Schizachyrium littorale*, *S. scoparium* and *SECALE CEREALE*.

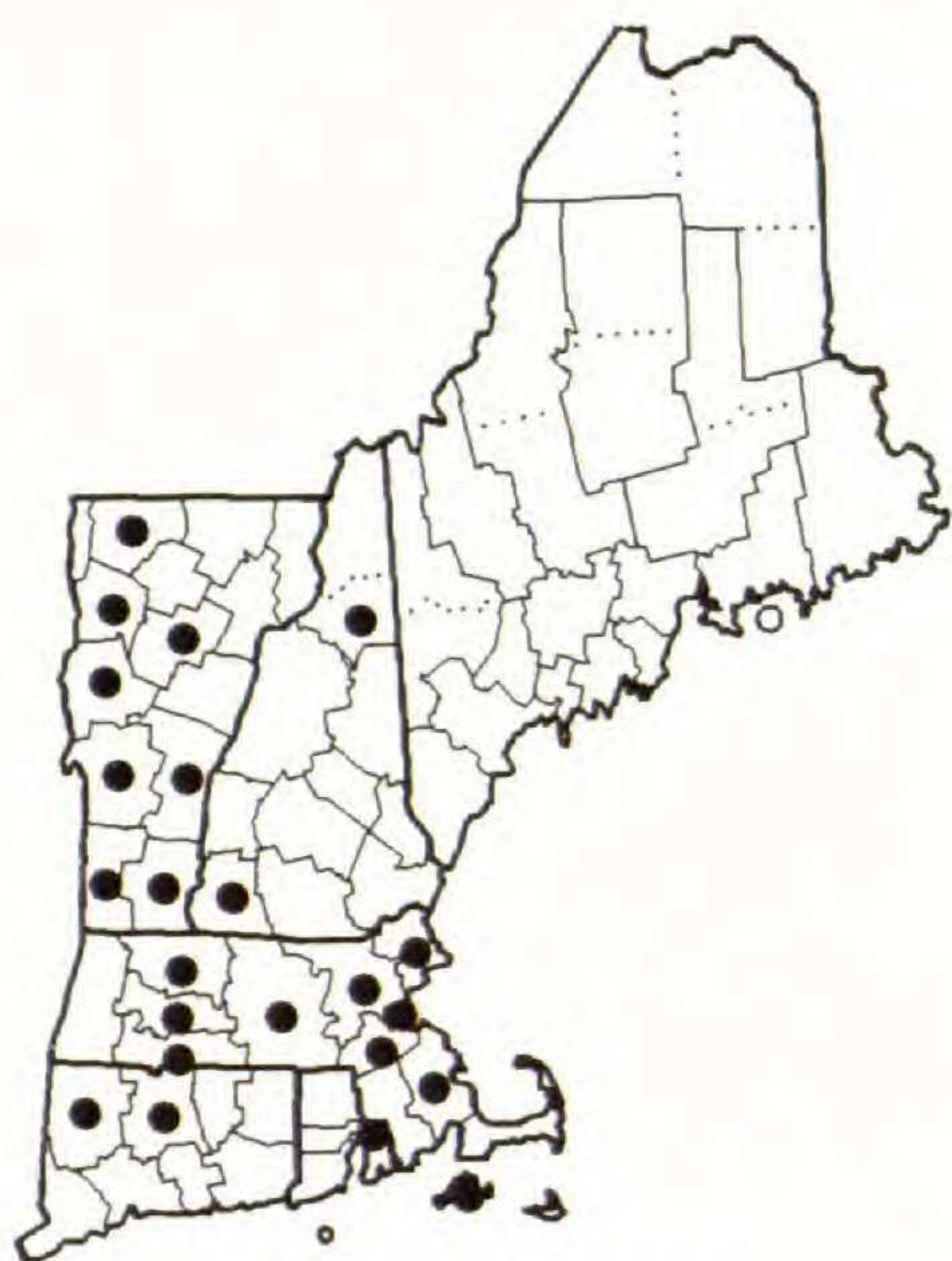
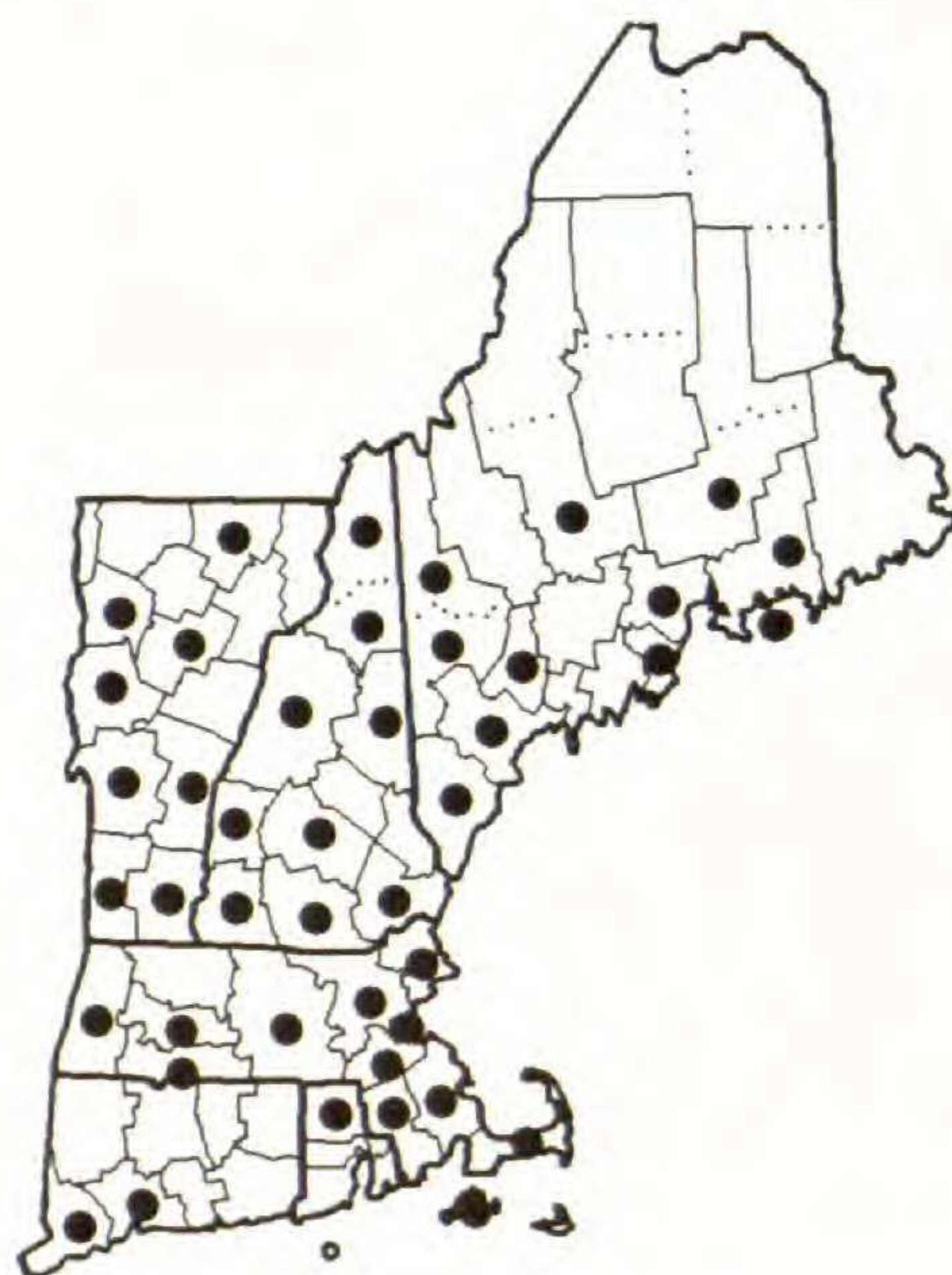
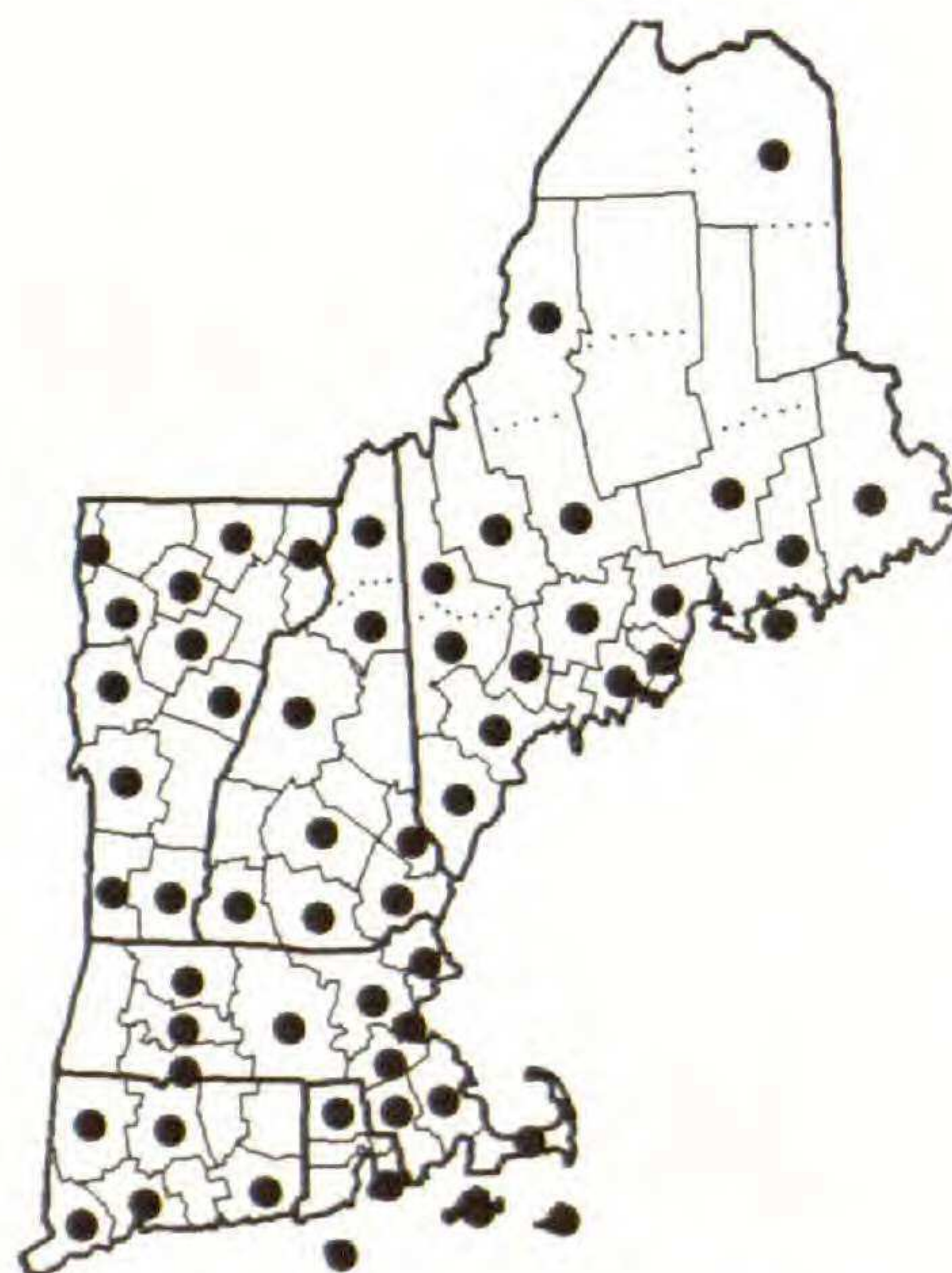
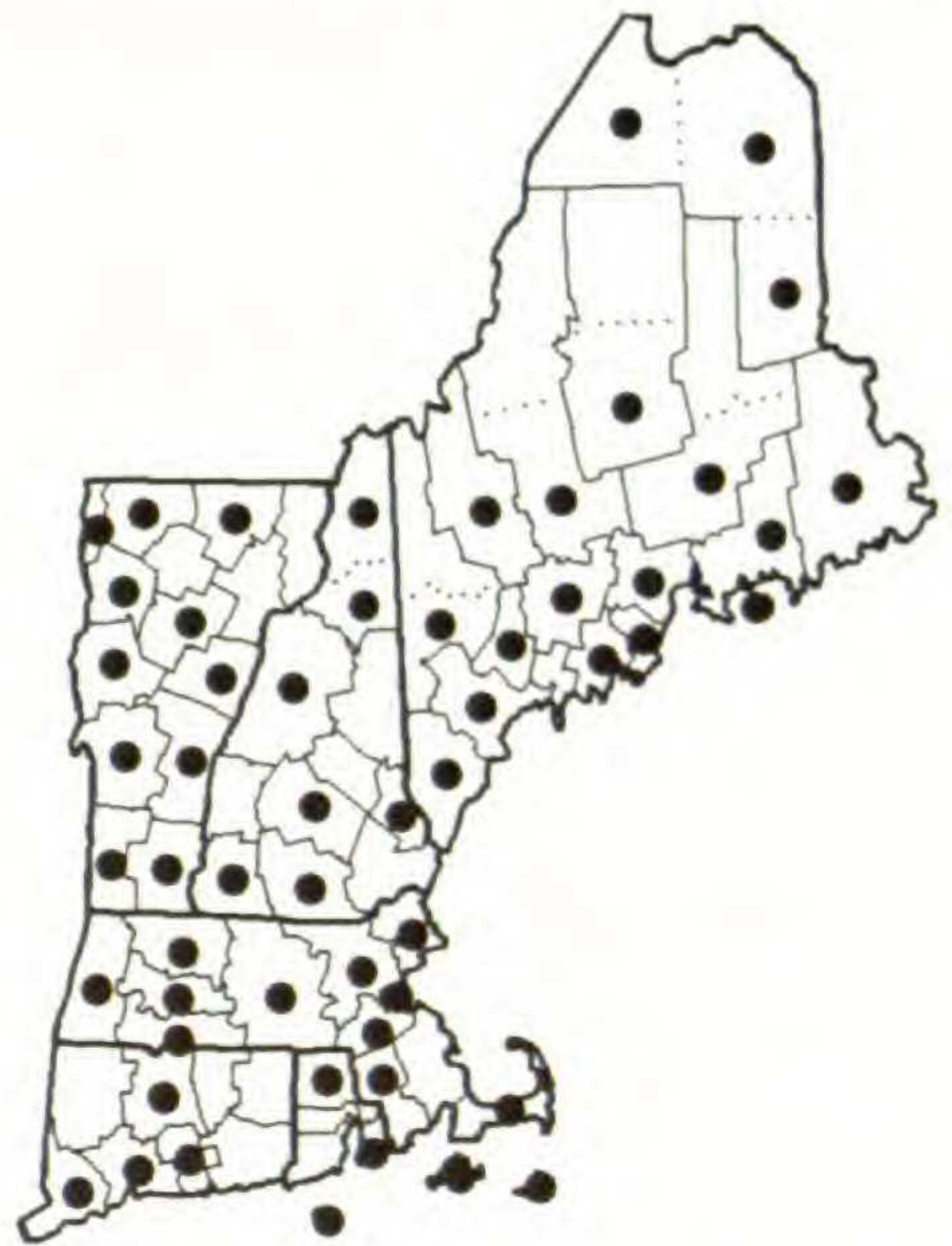
*SETARIA FABERI**SETARIA ITALICA**Setaria parviflora**SETARIA PUMILA*

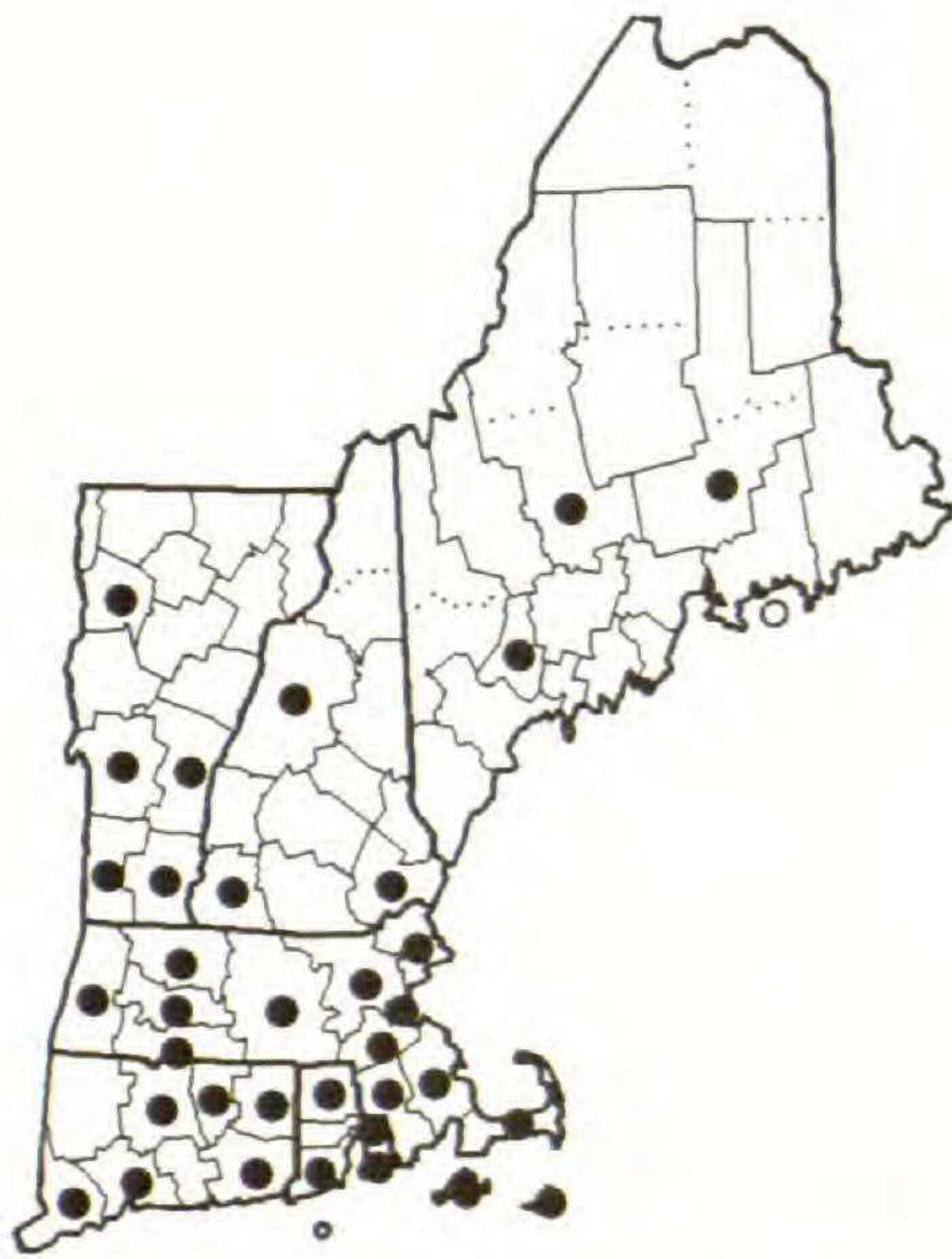
Figure 75. Distribution maps for *SETARIA FABERI*, *S. ITALICA*, *S. parviflora* and *S. PUMILA*.



SETARIA VERTICILLATA



SETARIA VIRIDIS



Sorghastrum nutans



SORGHUM BICOLOR

Figure 76. Distribution maps for *SETARIA VERTICILLATA*, *S. VIRIDIS*, *Sorghastrum nutans* and *SORGHUM BICOLOR*.



SORGHUM HALEPENSE



Spartina alterniflora

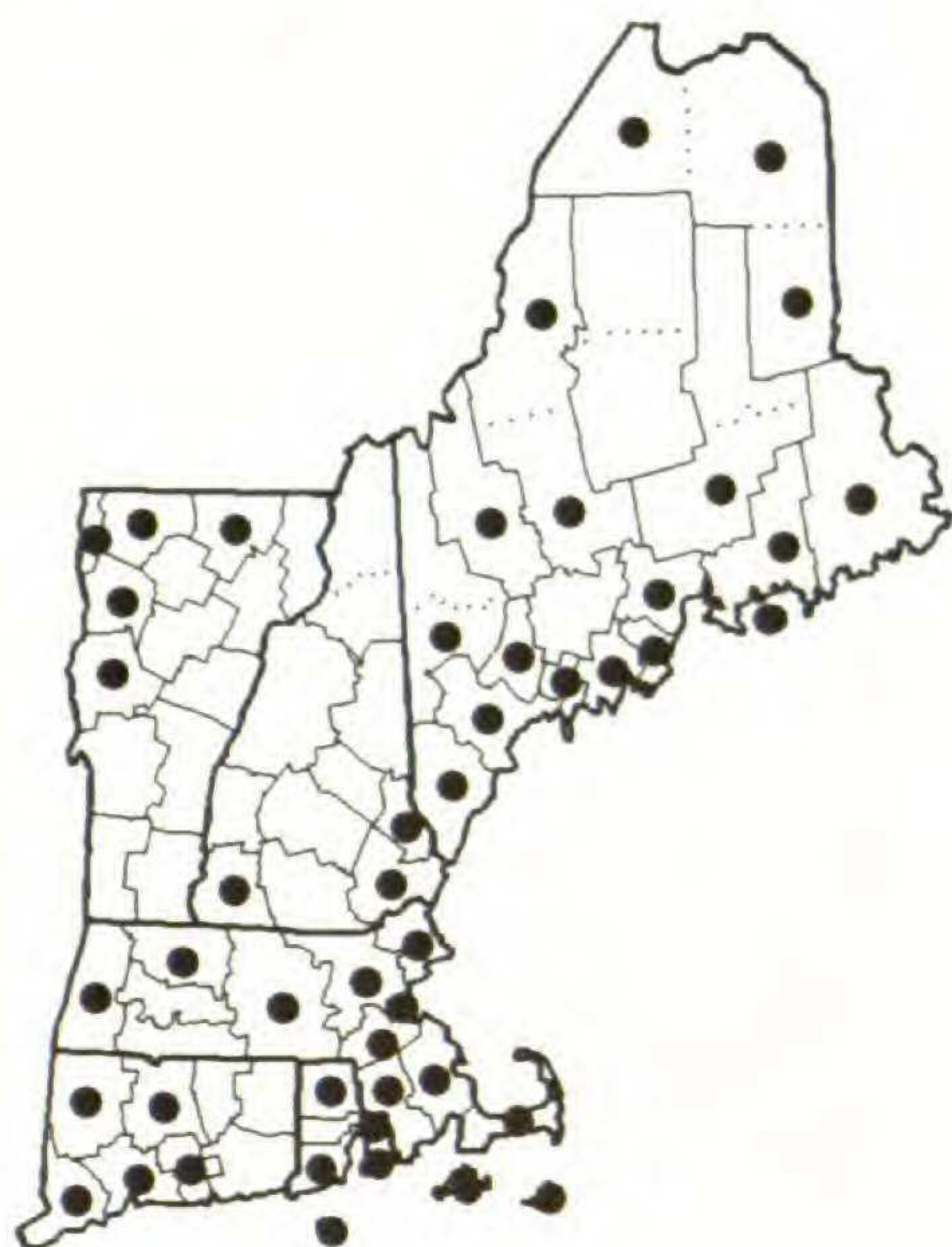


Spartina cynosuroides



Spartina patens

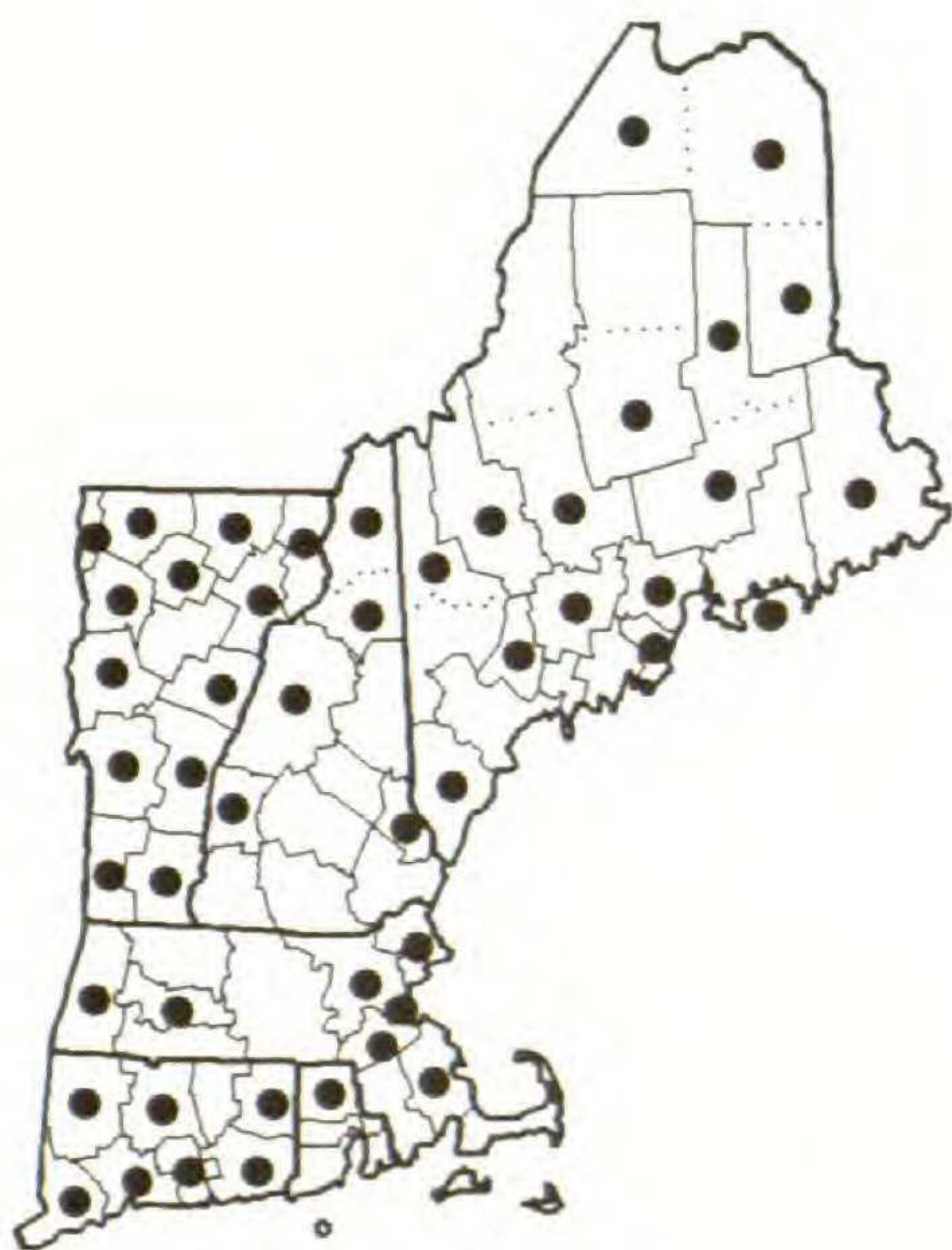
Figure 77. Distribution maps for *SORGHUM HALEPENSE*, *Spartina alterniflora*, *S. cynosuroides* and *S. patens*.



Spartina pectinata



Spartina x caespitosa

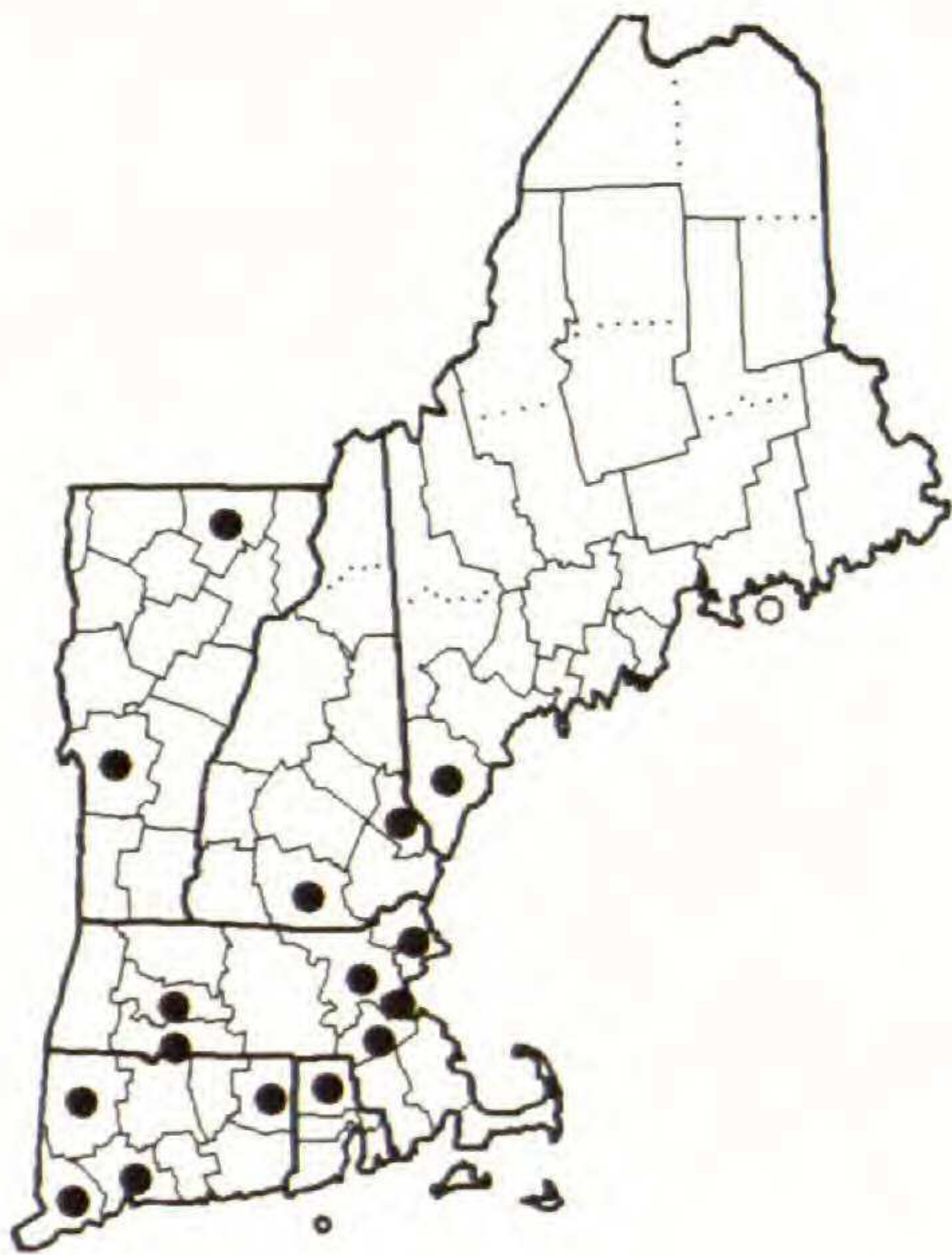


Sphenopholis intermedia



Sphenopholis nitida

Figure 78. Distribution maps for *Spartina pectinata*, *S. x caespitosa*, *Sphenopholis intermedia* and *S. nitida*.



Sphenopholis obtusata



Sphenopholis pensylvanica



Sporobolus asper

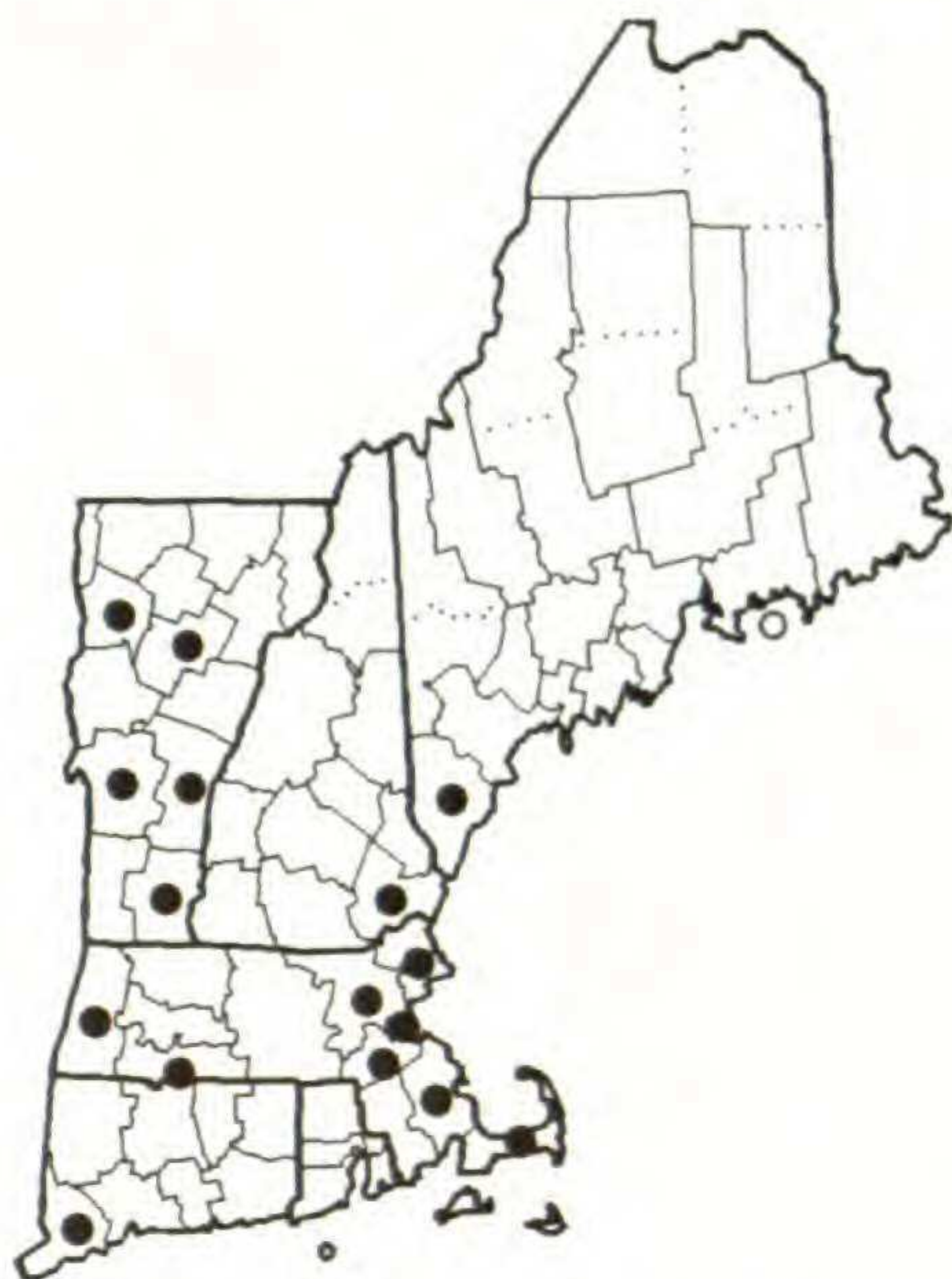


Sporobolus clandestinus

Figure 79. Distribution maps for *Sphenopholis obtusata*, *S. pensylvanica*, *Sporobolus asper* and *S. clandestinus*.



SPOROBOLUS CONTRACTUS



Sporobolus cryptandrus

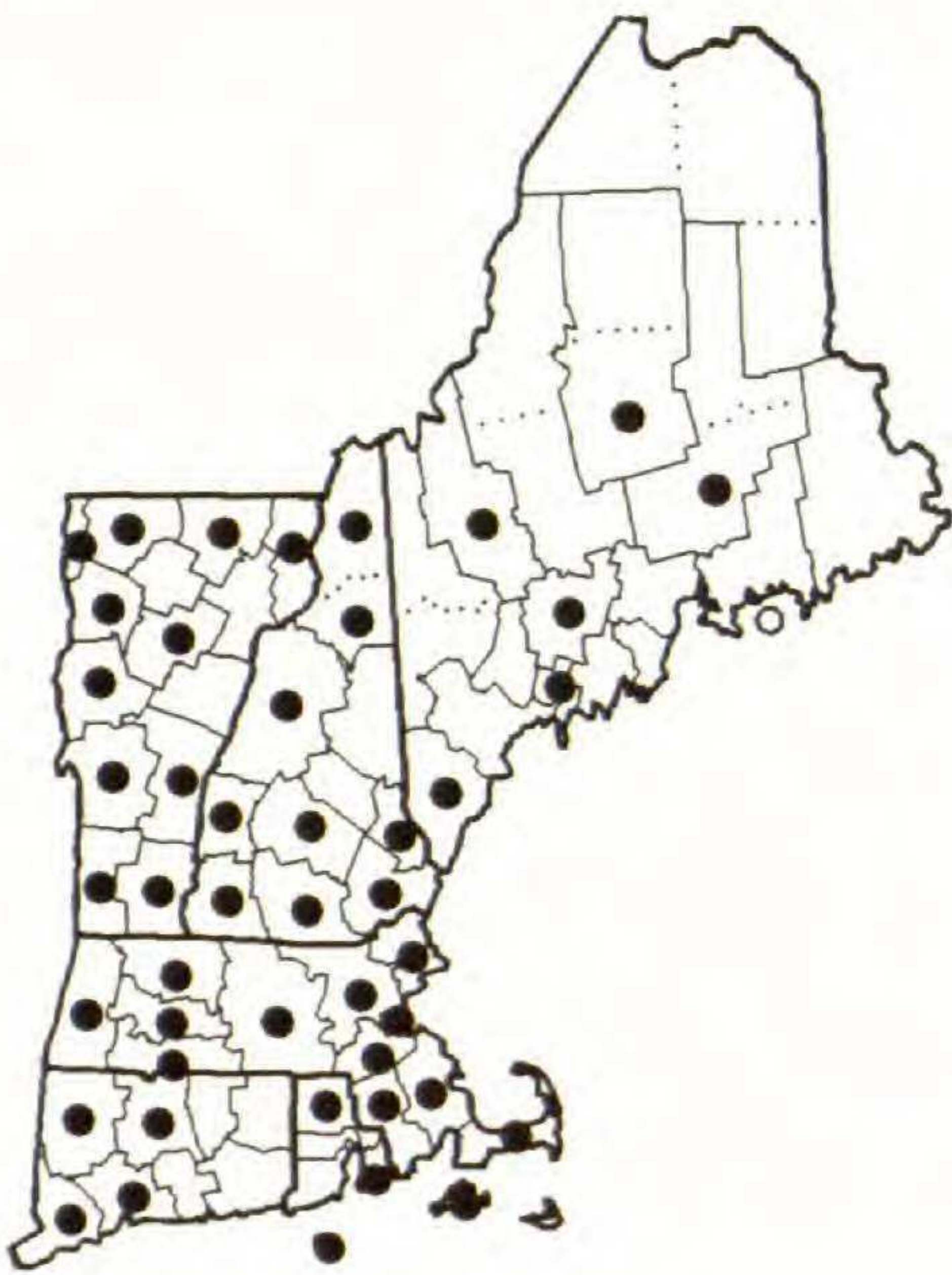


Sporobolus heterolepis



Sporobolus neglectus

Figure 80. Distribution maps for *SPOROBOLUS CONTRACTUS*, *S. cryptandrus*, *S. heterolepis* and *S. neglectus*.

*Sporobolus vaginiflorus*

TAENIATHERUM CAPUT-MEDUSAE

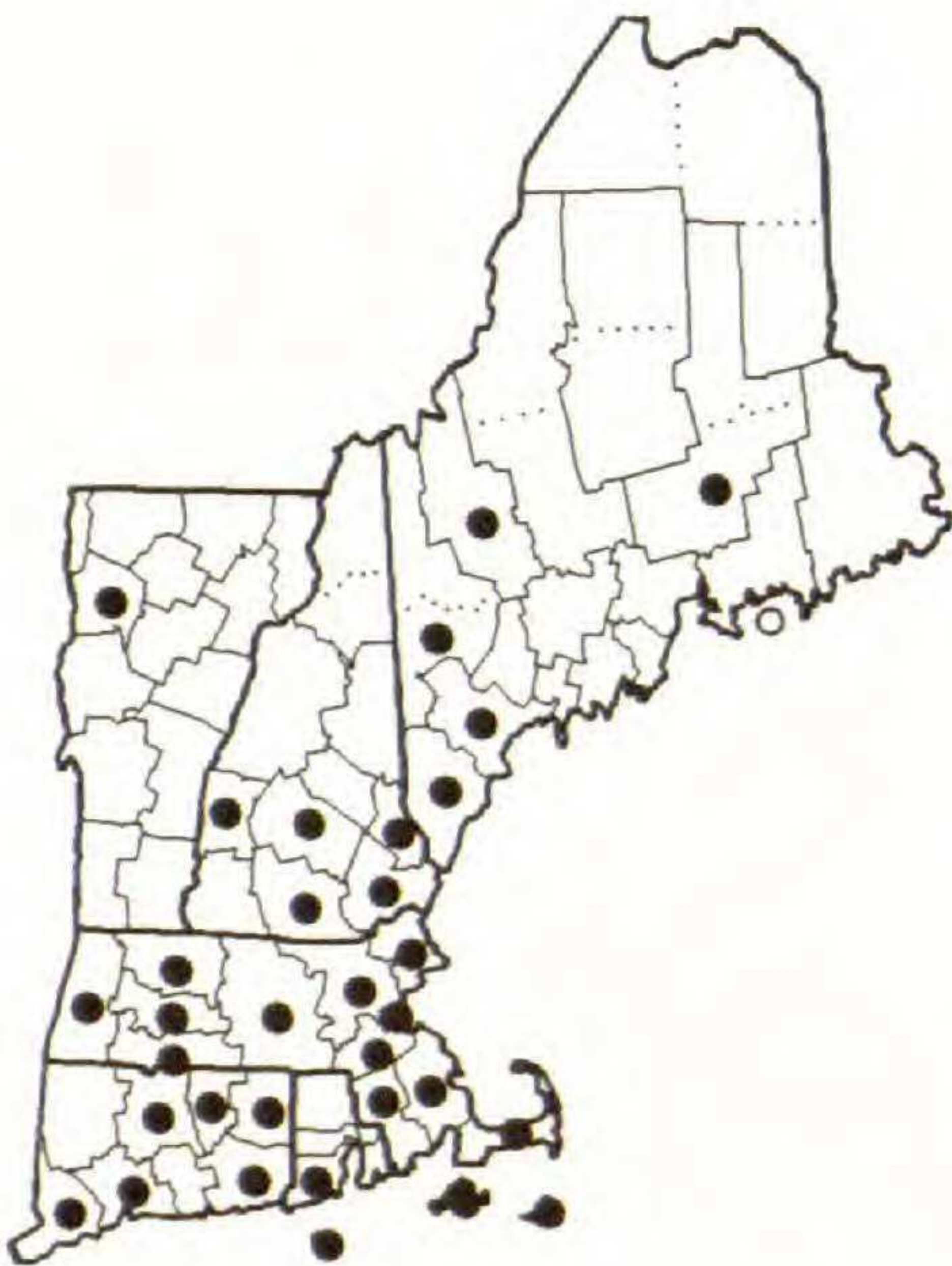
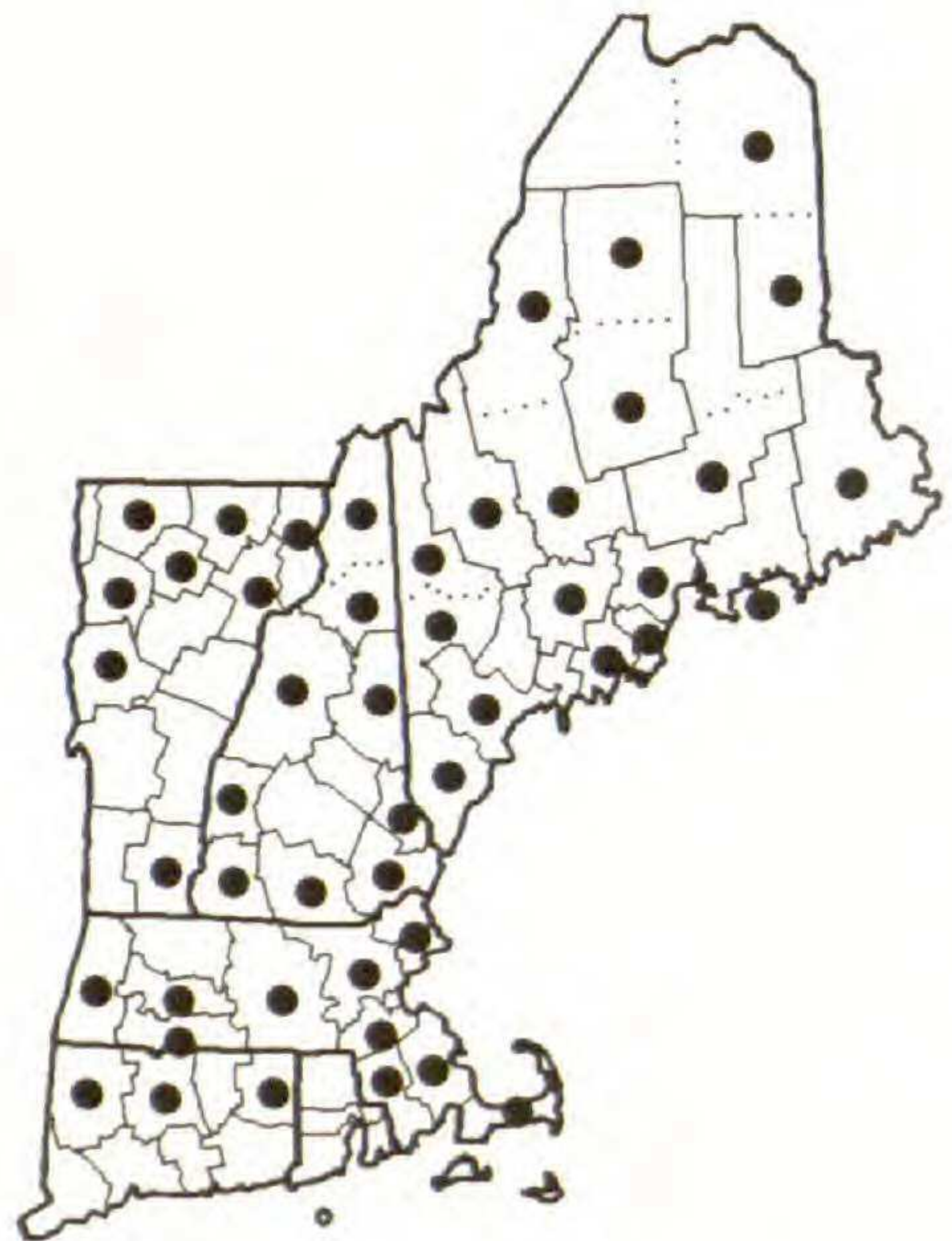
*Torreyochloa pallida*
var. *pallida**Torreyochloa pallida*
var. *fernaldii*

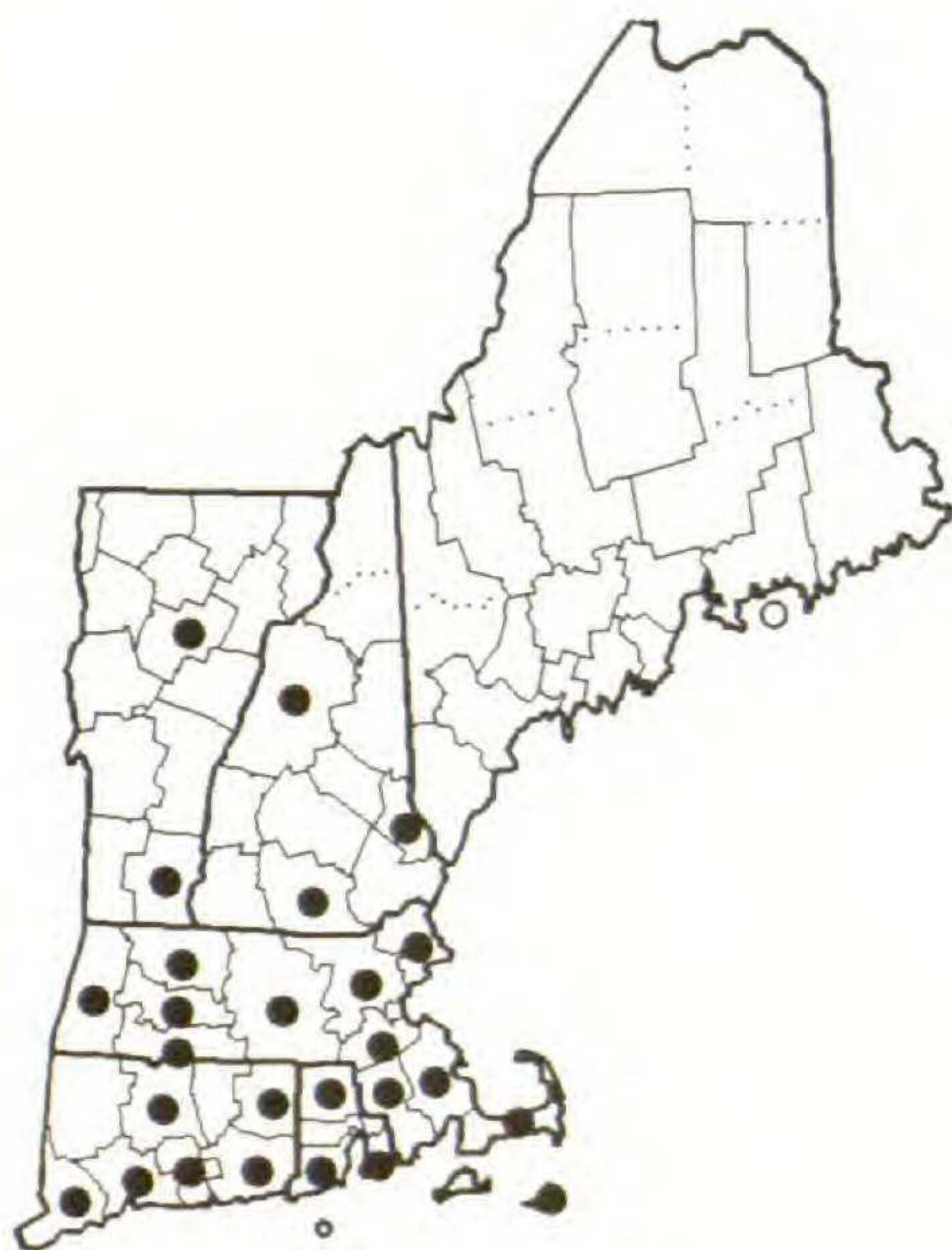
Figure 81. Distribution maps for *Sporobolus vaginiflorus*, TAENIATHERUM CAPUT-MEDUSAE, *Torreyochloa pallida* var. *pallida* and *T. pallida* var. *fernaldii*.



TRAGUS BERTERONIANUS



TRAGUS RACEMOSUS



Tridens flavus



Triplasis purpurea

Figure 82. Distribution maps for *TRAGUS BERTERONIANUS*, *TRAGUS RACEMOSUS*, *Tridens flavus* and *Triplasis purpurea*.

*Tripsacum dactyloides*

TRisetum FLAVESCENS

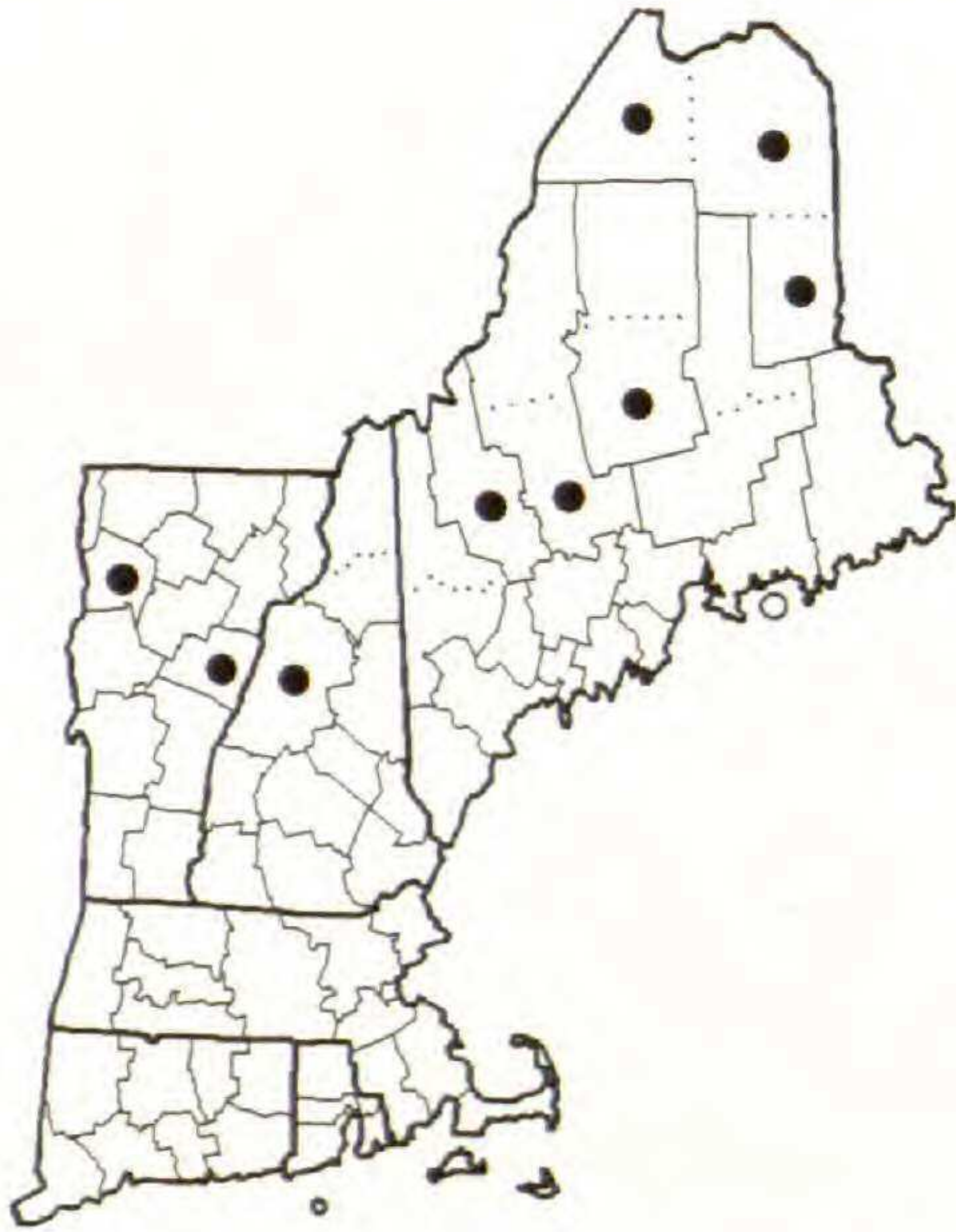
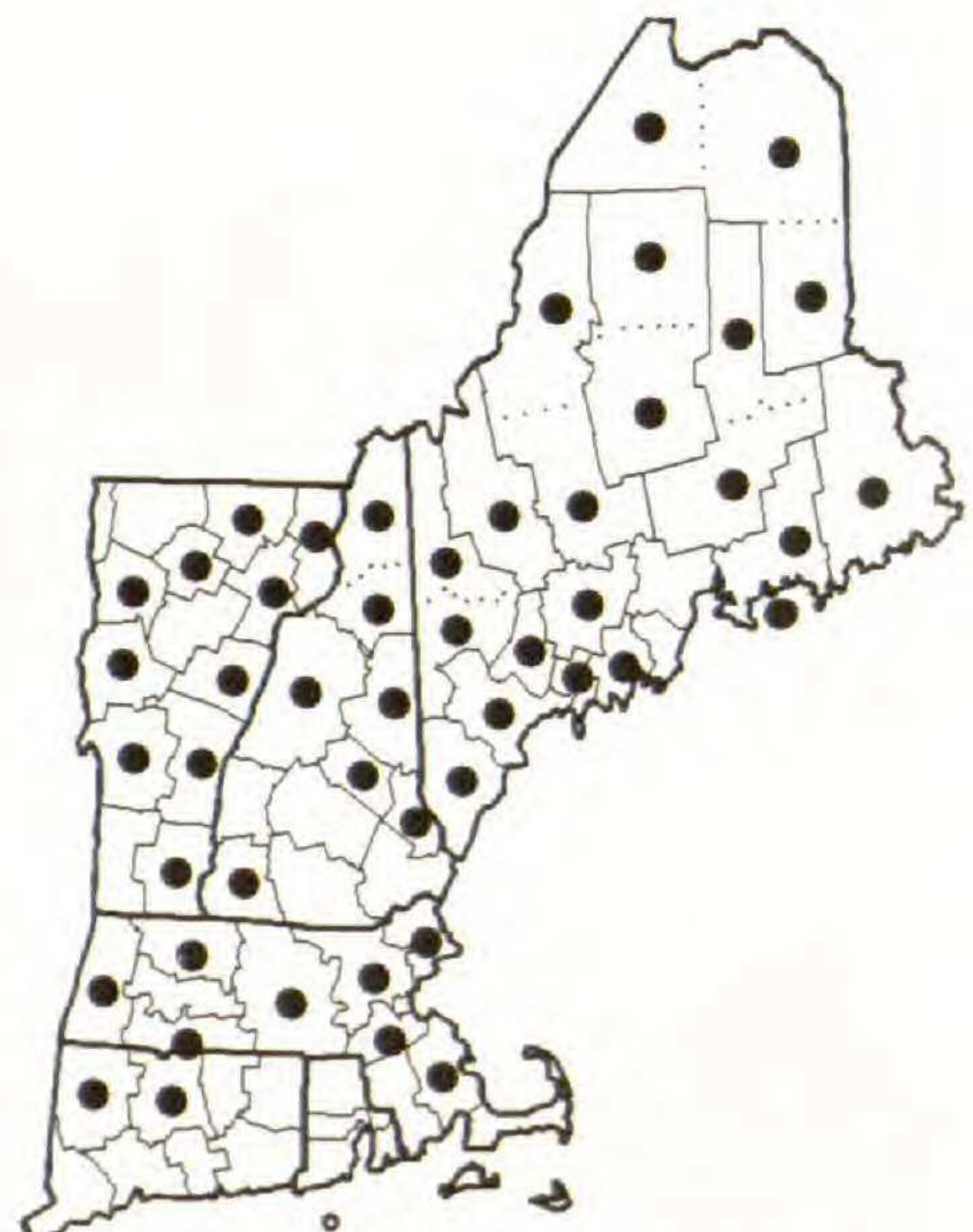
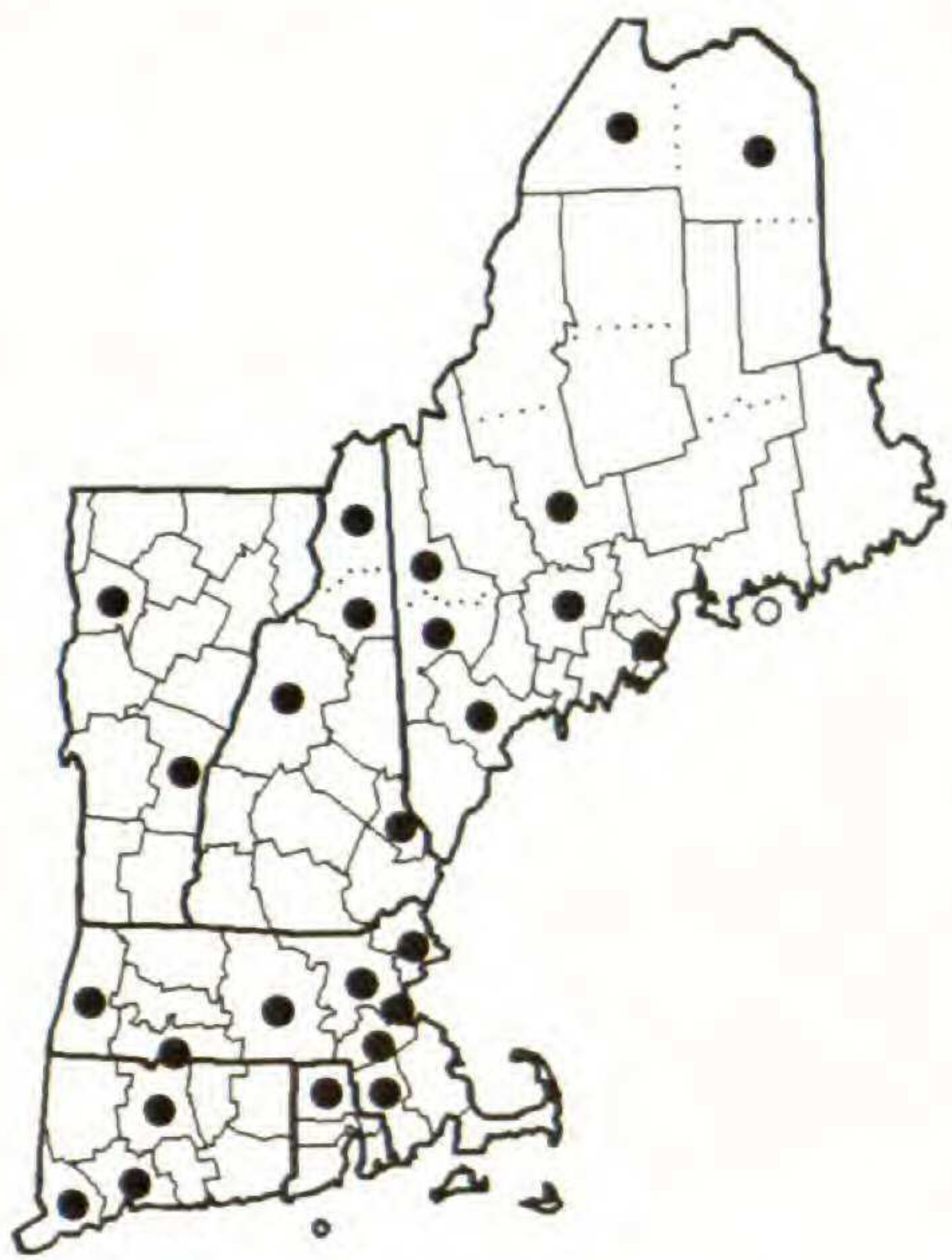
*Trisetum melicoides**Trisetum spicatum*

Figure 83. Distribution maps for *Tripsacum dactyloides*, *TRisetum FLAVESCENS*, *T. melicoides* and *T. spicatum*.



TRITICUM AESTIVUM



UROCHLOA TEXANA



Vahlodea atropurpurea



VULPIA BROMOIDES

Figure 84. Distribution maps for *TRITICUM AESTIVUM*, *UROCHLOA TEXANA*, *Vahlodea atropurpurea* and *VULPIA BROMOIDES*.

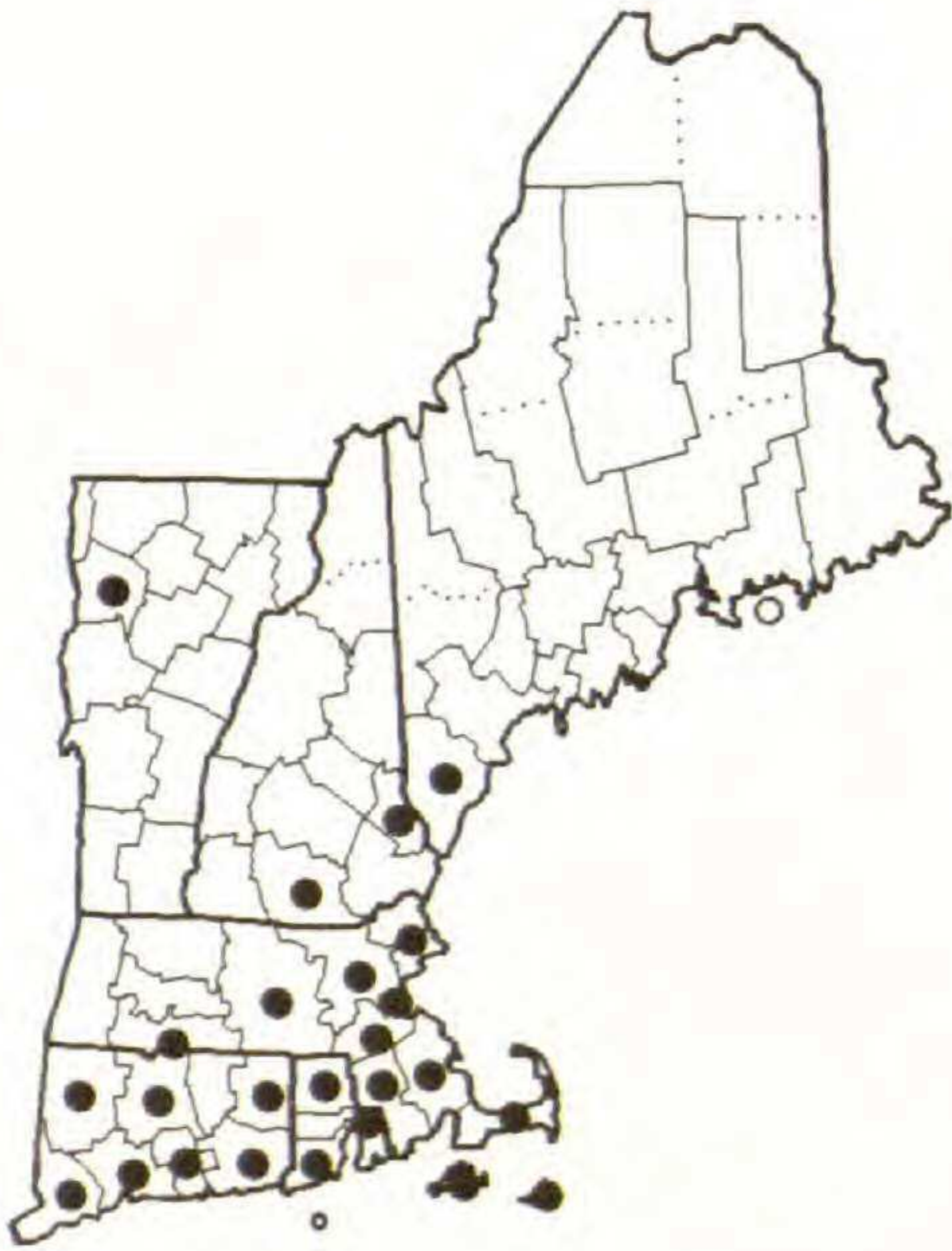
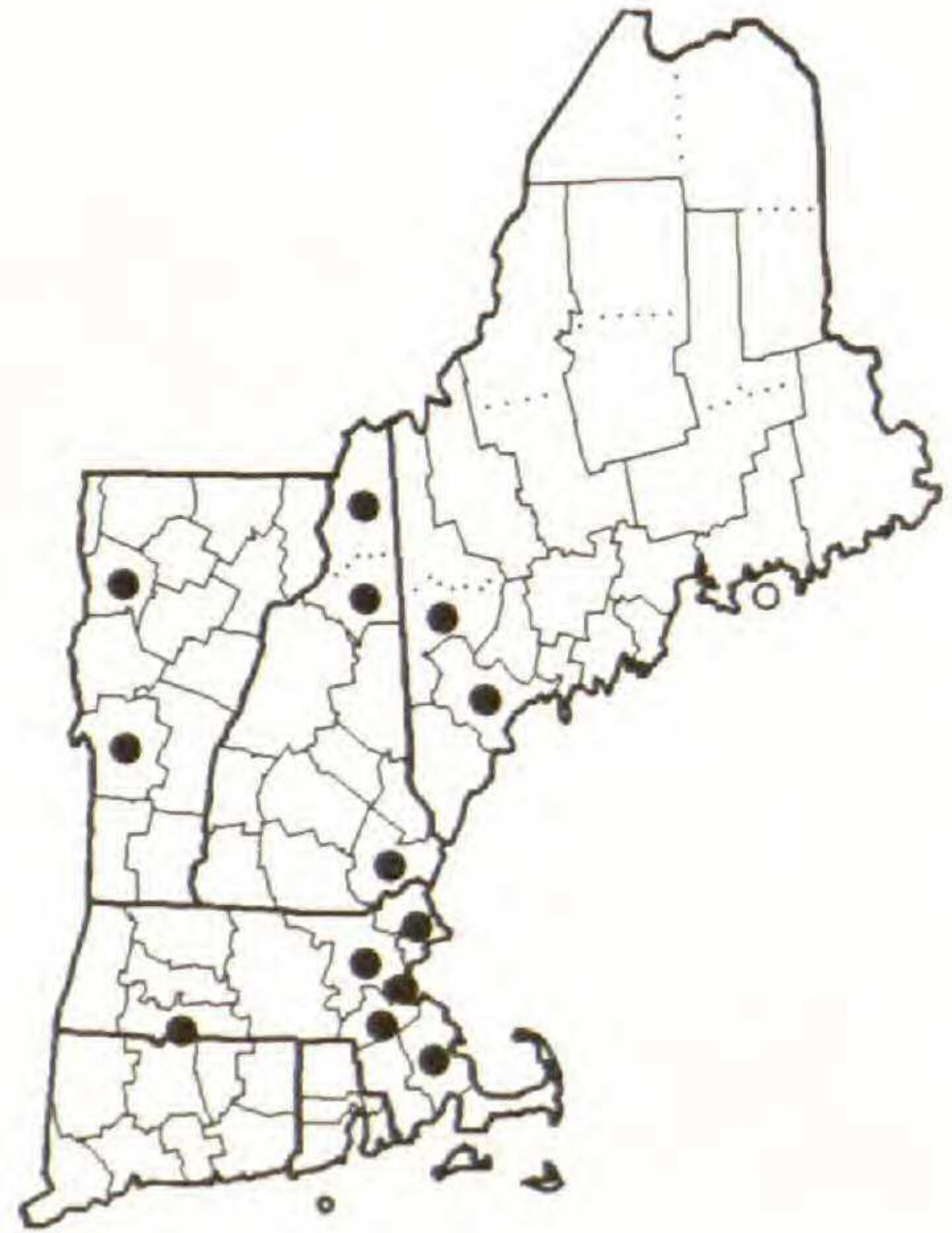
*VULPIA MYUROS**Vulpia octoflora* var. *octoflora**Vulpia octoflora* var. *glauca**ZEA MAYS*

Figure 85. Distribution maps for *VULPIA MYUROS*, *V. octoflora* var. *octoflora*, *V. octoflora* var. *glauca* and *ZEA MAYS*.

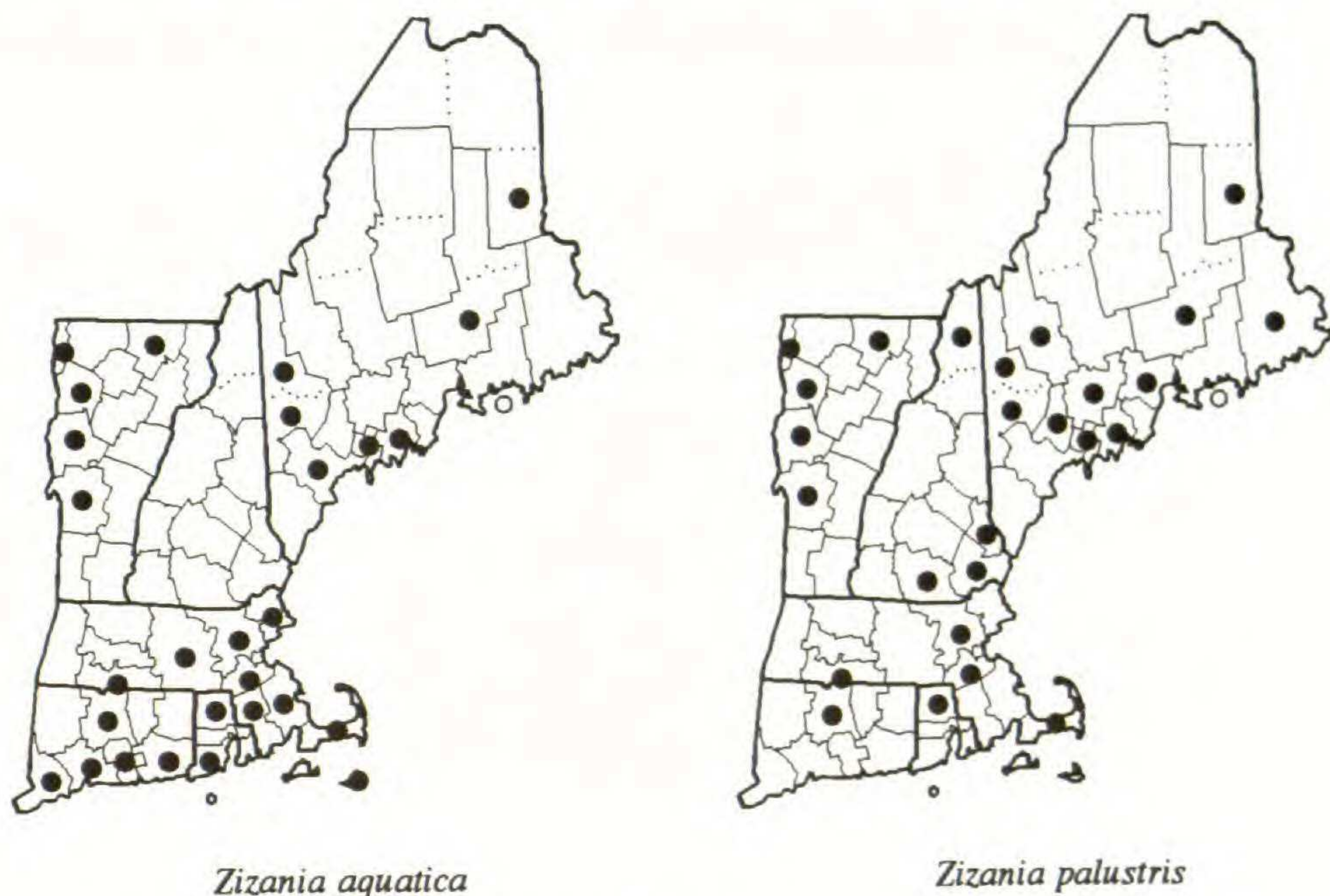


Figure 86. Distribution maps for *Zizania aquatica* and *Z. palustris*.

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NEBC MEETING NEWS

March 1998. Outgoing Club President Don Hudson, President of the Chewonki Foundation, spoke on “The New Natural History: A Naturalist’s Perspective on Science Education.” The topic was selected to provide insight into his working life as a naturalist and into his personal philosophy of learning and teaching, which stems from Don’s concern that students and the general public are poorly prepared to solve problems, address issues of ecology and the landscape, or contribute to discussions of public policy and stewardship of natural resources.

From his perspective as a teacher and lifelong student of natural history, Don shared his four “lessons” for teaching: (1) A sense of place is essential to fuel a lifelong passion for learning; (2) Teach what you love, so that your enthusiasm may infect even the most jaded student with passion; (3) The first job of a teacher should be to provide the space and time for unique discovery; and (4) The second job of a teacher should be to provide students with as many opportunities as possible to sort through the strands of our knowledge to find connections.

Don described how his love of science and learning was influenced by teachers and fellow naturalists who provided space, resources, questions, and encouragement, and demonstrated that the energy and enthusiasm of discovery is key to continued involvement and learning. He cited a recent article by E. O. Wilson in the *Atlantic Monthly*, dealing with the increased fragmentation and specialization of the scientific disciplines and the inability of scientists—or the educated public—to find coherence among scientific disciplines or between science and the humanities. Don also quoted William Morton Wheeler’s presidential address to the American Society of Naturalists, 75 years ago, in which Wheeler railed against academic “dry rot,” which he blamed on narrow specialization and senile abstraction, and the inability of professors to radiate interest and enthusiasm, particularly with respect to natural history.

Don described the Chewonki semester-long course for high school students, “The Maine Coast Semester,” as an attempt to practice the “lessons,” teach students how to see the connections, and stimulate the sense of place that provides a necessary foundation for both lifelong learning and participation in civic life. Students take two core courses, “The Natural History of the

Maine Coast” and “Literature and the Land,” along with standard courses in mathematics, history, and languages. The core courses teach ecological principles, geology, and the relations between the natural world and human culture, history, and economics, and include classroom and field exercises, discussions, and both independent and collaborative research projects. Abstract ideas are directly related to tangible experiences with local ecosystems and agriculture. Don concluded with his opinion that, for most scientists, an interest in natural history and a sense of place taught them the “big picture” first, and provided the foundation for learning about the more specialized and advanced branches of science. His concern is that this model is in danger of being lost as fewer teachers are able to convey this enthusiasm for natural history.

—LISA A. STANDLEY, Recording Secretary.